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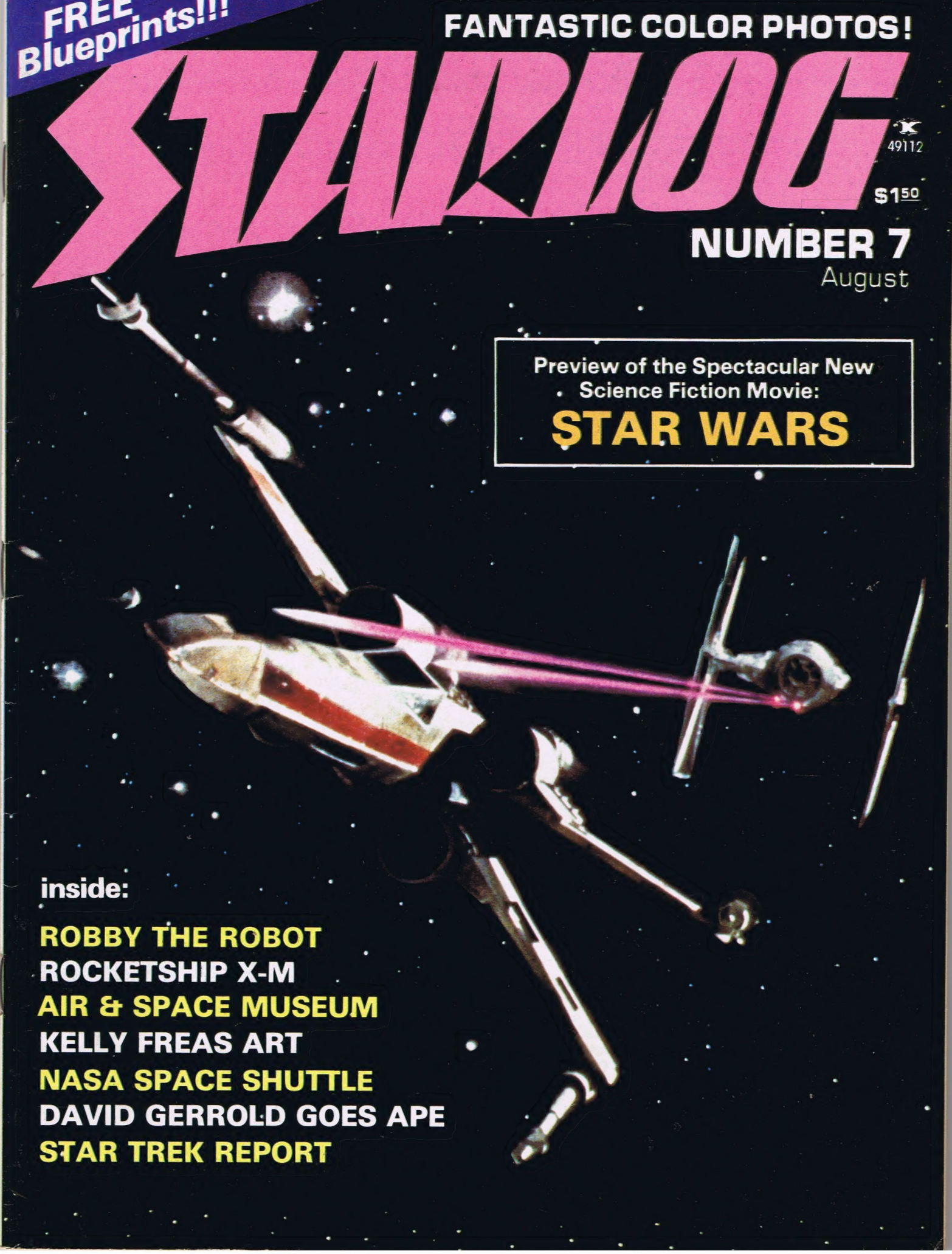
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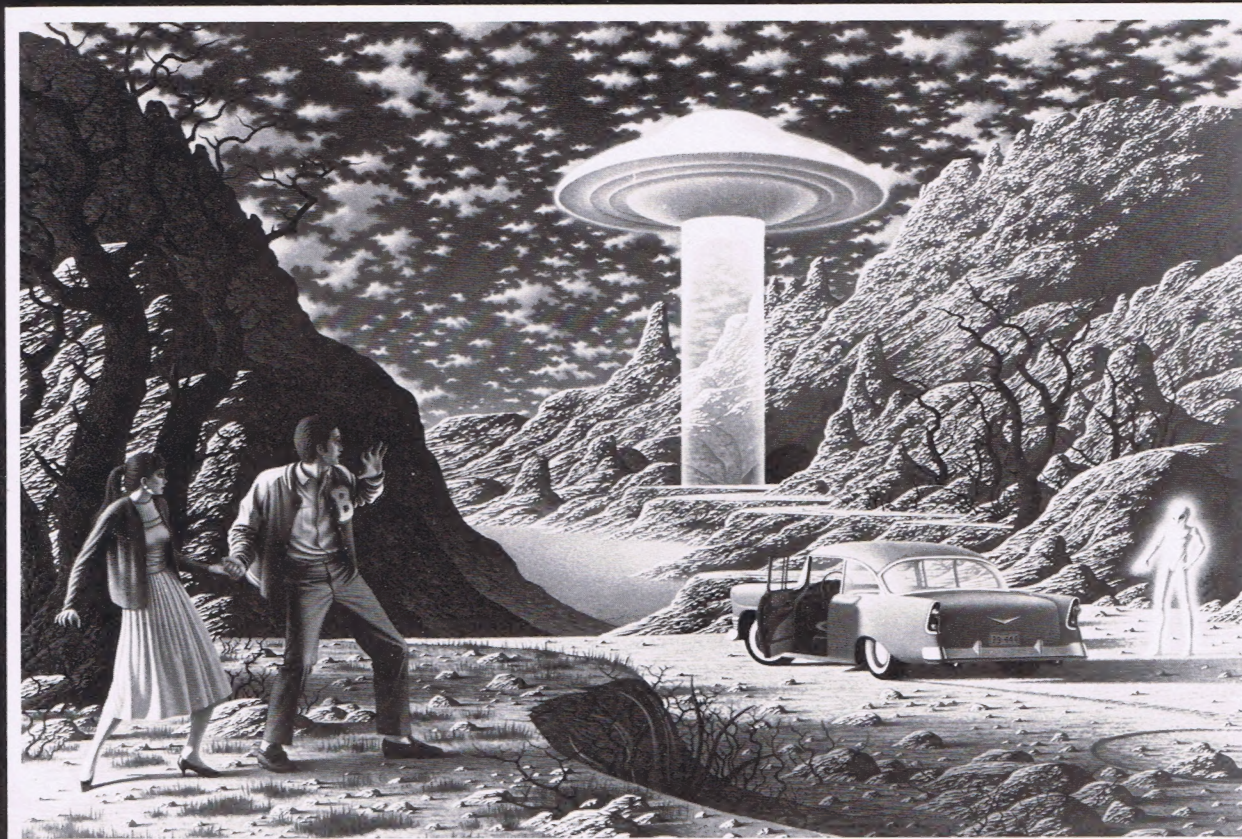
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STARLOG

NUMBER 7

THE MAGAZINE OF THE FUTURE

AUGUST 1977

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About the Cover: This battle in outer space comes from the final climactic scene of *Star Wars*: an incredible, twenty-minute, rocketship dogfight. The vehicle pictured in the foreground is a T-65 X-winged fighter; the vehicle firing at it is called a Tie-fighter. The "story-behind-the-story" starts on page 18.

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FROM THE BRIDGE

This past weekend I dropped by the latest science-fiction convention. Although our staff is generally too busy to attend each and every con, we do it when we can . . . and we always learn something important.

There was a table in the dealers' room for *The Prisoner*. That's right, that wonderful TV series that starred Patrick McGeehan in one of science fiction's favorite plot situations: an individual fighting for his freedom in a society designed to enforce group conformity . . . *The Prisoner*. At this table they weren't selling buttons or T-shirts or photos or posters. In fact, they weren't selling anything.

"Will you sign our petition?" was the plea of the young lady at the table. She was hopeful that the series can be brought back on television in the New York area, and she bought a table at the convention in order to solicit names for the petition her group plans to send to the local target station. Her letterhead reads proudly: "An informal cult fanatically dedicated to a revival of the television series, *The Prisoner*."

I laughed out loud . . . with pure utter delight! How completely wonderful to see people spending money and time fighting for *entertainment* that means so much to them. Of course I signed.

As I walked around the other rooms of the hotel, I kept thinking about the people who take up causes of that sort. People with strong values. People with a purpose. People who love with enough passion to take action . . . to spend their weekends working at what could easily be hopeless causes. Or are they . . . ?

Most of these efforts will actually be *seen* by the people at whom they are aimed, and some of these efforts will even accomplish their purposes. This is the nature of a free society: individuals have the opportunity to fight for what they want. There is no guarantee that you will always *get* what you want, but the system of free public expression always allows someone to *try*. And that's the most important thing.

There's a little lady we met in California who can't always find STARLOG at her favorite newsstand. Some of the dealers she has talked to say they can't get enough copies from the local wholesaler. Others say they never heard of STARLOG. Generally, her questions have not brought very good answers. This lady is not taking the situation lying down. She has launched a letter-writing campaign (organizing all of her friends who are also STARLOG readers) to deluge the local wholesalers and dealers with requests . . . to let them know that there are people out there to whom STARLOG is important!

No matter what magazines you enjoy, no matter which TV shows and movies, no matter what products of entertainment bring you pleasure and keep you informed . . . you have not only the *right* to speak up and fight for what you want but the *obligation* to do so. It's an obligation to participate in the system of freedom and make it work, but most important *it's an obligation to yourself and to your personal values*.

If it's our magazine you're fighting for, naturally we appreciate your efforts to keep STARLOG alive. Telephone calls, letters, visits to local dealers will work wonders. By the time only *three* people have marched into a news dealer and asked for STARLOG the guy behind the counter will be climbing the walls to be sure he has this magazine next issue. But that isn't the main point of this letter . . .

The main point is for us to give a pat on the back to those people who are out there actively fighting for high quality science-fiction entertainment and to encourage the rest of you to join the parade. We'll all benefit by having available more of the dramatic adventures that lift our spirits, excite our minds, and make our expectations for the future soar.

This issue of STARLOG contains many special features which we have been preparing for several months: the blueprints and technical data on the Eagle (pg. 34), the biography of science fiction's most lovable and durable character, Robby the Robot (pg. 60), the history of *Rocketship X-M* and the story of its salvation (pg. 53), a talk with one of the writers of the *Star Trek* movie script (pg. 32), the first of a series of visits to famous museums and science installations around the country (pg. 41), and an interview with a man who has lived around the backstage work of *Star Wars* (pg. 18). And much more . . .

This issue is one of the ways we are fighting. We hope STARLOG contributes to your love of science fiction and encourages you to take up a banner for your favorite science-fiction entertainment. Enjoy!

Kerry O'Quinn/Editor-in-Chief

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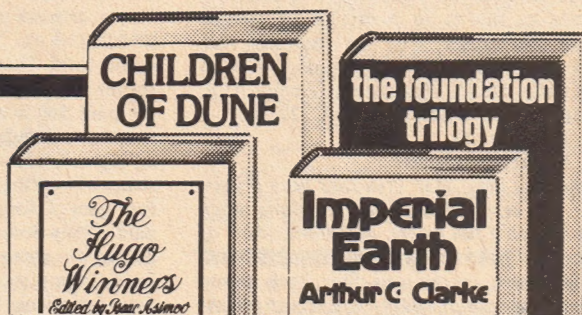
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COMMUNICATIONS

SNEAKING IN FACTS

... I have noted that too many other SF fans are painfully ignorant of the most basic facts of hard science. I see in STARLOG a golden opportunity to sneak in (as Roddenberry did in *Star Trek*) bits, bites and pieces of science fact.

Dean Loring

Ft. Lauderdale, Florida

Fortunately we do not have to sneak hard science into our publication. We don't know who you've been hob-nobbing with, but almost all of our readers have requested science articles right along with their requests for science-fiction features. Our VISIONS spread regularly deals with the relationship between science fiction and facts, and our Log Entries include more NASA and space news every issue. Our educational tour of science installations around the country starts this issue with the Air and Space Museum and, even as we speak, Dr. Isaac Asimov is working on a faster-than-light-travel article which will at long last explain how the Enterprise travels at "impossible" speeds. Education is not our main purpose, but science is alive and well at STARLOG.

TREK COMMEMORATIVE

... Every year the U.S. Postal Service puts out a number of various commemorative stamps as salutes to a myriad of people, places and things. Why not recognize *Star Trek* with a commemorative stamp? Join us now and write to—Postmaster General, U.S. Postal Service, Washington, D.C. 20260.

Dawn Atkins

Moore, Oklahoma

Wonderful idea! Star Trek fans have proven they can accomplish almost anything when they launch a full effort. Meantime, short of an official government stamp, collectors will be interested in the new Star Trek stamp album and stamp packets advertised for the first time anywhere on page 69 of this issue. We've seen them and they are truly fantastic. In fact, some people at Paramount have gone so far as to say that this is the finest Trek product yet produced.

FIGHTING CANCELLATIONS

I wish you would spread the word in your fine science-fiction magazine about the impending doom of *The Fantastic Journey*.

Mary Ward

Milwaukee, Wisconsin

According to our sources, TFJ has only a fifty-fifty chance of being picked up for a second season. You can let your opinions count by addressing them to NBC (30 Rockefeller Plaza, New York, NY 10020; Attn: Program Director). And don't give up the fight to resurrect Space: 1999, Rumors about ITC, Gerry Anderson, and a possible new (and different production of Space are flying fast and furious around town. None of them have been officially confirmed at this time. However, an increasing volume of mail directed at ITC (555 Madison Ave., New York, NY 10022, Attn: Program Director) certainly won't hurt chances for a third season of Space.

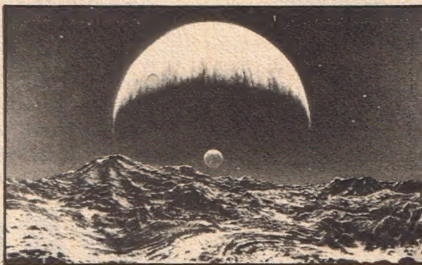
HOLOGRAPHY NOW

... Thought the 5th issue of STARLOG was great, especially the article on 3-D. The thing that interested me most was the article on "Holography for the Day After Tomorrow." I know very little on this subject and would like to know more.

Mark Arnold

Long Beach, California

For more information on holograms check out Log Entries for an item on the Museum of Holography in New York.



DON DIXON/SPACE ART

... When I presented a copy to my 90-year-old Italian grandmother yesterday she sang a little song, smiled, danced and generally carried on. She'll be lording it over all the other Italian grandmothers for the next year or so! Flew to NASA Ames last week to present the Venus artwork (for an animated film, see STARLOG No. 5, pg. 32) and was given the grand tour. They're doing bio-medical tests for the shuttle program right now. Volunteers get paid \$40 a day just to lie in bed for a month, to simulate the atrophying effects of zero-grav. On the last day the poor devils are strapped into the centrifuge and whirled up to four-gees. I forgot to ask whether they get paid if they decide to resign on the 29th day. So far it seems evident that women hold up better than men. Incidentally, if you ever do interview Zienia Merton of 1999 ask her how she feels about space artists. I think it should be a simple wedding, just a few friends and family...

Don Dixon

Rialto, California

GERROLD HITS NERVES

... Bullshit, David (excuse the language). You can't blame programming decisions on policy. Policy can't send a memo down to the film room to cut a print. People have to do that, David. Somebody has to make a decision and act to apply that policy. Sometimes following policy can be damned immoral, and the people who follow it should be exposed. Give us that vice-president's name. ...

Richard McEnroe

Rockville Centre, New York

... I've known all about "supposed" Christian pressure groups for some time (a majority of whom fit very well into Erich Hoffer's "The True Believer" category—a group of mentally ill people who gather together and commiserate about how miserable this world is). Still, censoring writers in any type of media is a breach of the First

Amendment of the Constitution. If it wasn't for the great corporate fear of loss of Commercial Time there would be no censorship.

Amy Kisil

Solon, Ohio

Maybe we and some others could get together and build (our own) church, for I feel exactly as you do about what's happening to religion. I sometimes look at the people around me and notice that at times it is truly an ugly place, this planet Earth.

Steve Fiorilla

Waltham, Massachusetts

AVOIDING A STAND?

... At the bottom of David Gerrold's column, you printed something about his opinions not necessarily being that of the editors, etc. Are you saying that you disagree with him, or are you saying that you don't want him to take a stand on anything?

Kim Wrobel

Oceanside, New York

An editorial disclaimer has two purposes: (1) It lets the readers know that no matter what the content of the column, it has not been censored or altered by the magazine, and (2) It gives exclusive credit to the writer rather than to the magazine for the ideas expressed in the column. The fact that we, as a magazine, allow Mr. Gerrold this unbridled freedom of expression (without printing our agreement or disagreement) is in itself proof to any observant reader that STARLOG not only takes strong editorial stands but allows a public voice for independent stands as well.

2001 CONTROVERSY

I agree with Mr. McEnroe on one thing: Kubrick should have explained a little more clearly (the ending of 2001). But all you have to do to really understand it is to go to the bookstore and get the book by Arthur Clarke ... It explains it in more detail than the movie.

Ben Fly

Midland, Texas

... Mr. McEnroe felt that in 2001 the fact that the orbiting satellites were nuclear bombs was not shown. It was shown. The ape tossed a bone into the air and it was transformed into the satellite. Man's first weapon (the bone) became Man's ultimate weapon (the nuclear satellite). Like many other points in the movie it's subtle, but it's there.

Duane Pontius, Jr.

Birmingham, Alabama

On page 70 of STARLOG #6 the following caption errors should be noted. Upper right is Albert Silva of Paramount Studios finishing the clay model. The storyboard artist below and to the left is Al Nozaki, the unit art director and principle designer of the Martian war machines. Gordon Jennings is incorrectly identified as George Pal in the illustration to the right of Mr. Nozaki.

ANTI-CENSORSHIP

Re: your article on censorship of "Star Trek".

Since the Supreme Court made its super blunder for the decade by decreeing that communities could set standards of taste and prosecute and punish those who disagreed with them, all the wierdos are crawling out of the woodwork. Obscenity, pornography (and blasphemy) exist in certain people's minds; they are not entities. Unless the public screams long and loud about this censorship, the Court will not admit its error and issue another interpretation. We had all better complain to our Congressmen before the following scene becomes a reality:

As the attendant wiped off the windshield while the pump filled the tank, Murray Bloch eased out of his car in a deliberately casual manner. He walked around as though stretching his legs. When he ambled back to the car, he asked how the weather was in this area. The attendant answered in a friendly way.

"We'll be staying overnight at a motel here. Can you recommend one with good TV reception?"

"The Bradbury Motel down the street two blocks on the right has very good reception. Ten channels."

Murray felt relieved that he had met a man who did not frown on television as kid stuff. "I hope they get a wide selection of programs," he said with feigned innocence.

The attendant gave him a knowing look and in passing to remove the nozzle from the tank, said: "Channel four is the re-run channel. They show re-runs fourteen hours a day."

"Star Trek?"

The attendant nodded.

Murray met him at the pump and revealed quietly: "We are trying to see an episode called 'The Return of the Archons' in its entirety. We've watched it in three cities and still haven't seen about ten minutes."

"You're in luck. They're showing it today at five. I don't have any way of knowing which nine or ten minutes the local censor will cut out of it."

"Nobody can predict that." Murray paid for the gas and told the attendant to keep the change. Then he got into the car and gave the good news to his wife, son and daughter. While they talked happily, he drove down the street to the motel.

But at five-forty-five *Star Trek* ended and a local news program came on to fill out the hour.

"We didn't get to see whether they destroyed Landru or not," protested Murray Junior.

"I want to see them escape," shouted Susan. "Nobody should have to live in a horrible place like that."

Their mother put her arms around them. "We'll find out. We will drive across the country until we find a station where the censors were offended by some early part instead of the last few scenes."

"It's a good thing I get four weeks vacation this year," Murray said as he visualized the long search to circumnavigate the Laws of the Body.

It can and is happening to us. Stand up for freedom now!

Merle Taliaferro
Kingsport, Tennessee

WHOSE ROBOT?

... In the *Outer Limits* TV Episode Guide I saw the title "I, Robot;" it was written by Otto Binder. I was confused. Why would two different authors, Asimov and Binder, print a story with the same title? Is Binder copying Asimov or is Asimov copying Binder? Please answer ... it's driving me crazy!

Norman Massry

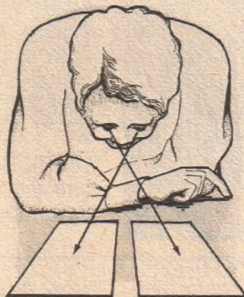
Saratoga Springs, New York

Otto Binder was one of the most prolific fantasy, SF and comic book writers of this century. (Fans of the old Captain Marvel and Marvel Family comics will be familiar with his name.) Otto wrote many SF short stories. His first robot story, "I, Robot," appeared in the January, 1939 issue of Amazing Stories. The Outer Limits screenplay was an adaptation of this (Binder) story. It was the first of a series of ten short stories about his android hero, Adam Link. Dr. Asimov wrote a series of nine robot short stories from 1940-1950. He readily states that "I read the Adam Link stories by Otto Binder and was probably influenced by them." In 1950, Doubleday & Co. printed a collection of those Asimov stories under the title I, Robot. However, it was his publisher at that time, Martin Greenberg, who chose the title.

FANS OF 3-D GROW

... The Cross Method of "3-D Without Glasses," seems rather dangerous. I would think there would be a good chance of (your eyes) getting stuck!

Unsigned



... Your list of features in #4 missed *Jivaro*, a Paramount release in color starring Rhonda Fleming. ... Not only shot in 3-D, but also color was the Warner Brothers feature *Them*, which was then nearly released in B&W 3-D, but finally came out B&W flat only. And it becomes increasingly evident from viewing that *Invaders From Mars* truly was shot in 3-D!

Craig S. Cummings

Chicago, Illinois

Paramount's Jivaro with Lamas and Fleming also starred Brian Keith, Lon Chaney, and Marvin Miller; the film has been reported to have been also exhibited under the title Lost Treasure of the Amazon. Many people have suggested that Invaders From Mars was shot in 3-D; according to the film's current owner and distributor, Wade Williams, this is not the case. Incidentally, George Pal has said that he had hoped to shoot War of the Worlds in 3-D, but the studio thought it would be too risky. (As we go to press we have just been informed that L.A.'s Tiffany theater has scheduled an additional showing of Kiss Me Kate for the week of June 22.)

VISIONS FOR THE FUTURE

... Your magazine is doing this country an inestimable service since it helps convince

young people that we do have a future, and that they can help shape that future through science. This is highly important in a modern world which all too often, seems given over to forecasts of doom. The "Visions" article was interesting and enlightening as always. (Your series is aiding teachers in educating students. I saw one of the previous articles in this series hanging up in a high school physics class.)

Carmen Minchella

E. Detroit, Michigan

WE AIM TO PLEASE

... I'm very pleased with the way you handled my data on the (*Logan*) TV show. The pilot's "answer print" will go to CBS this week and we should have a yes or no on the weekly series by April 25th. STARLOG, as always, delights the eye! The SF field has needed a mag such as yours for 20 years. I know that *Star Trek* inspired it, but you have gone far beyond *Trek*, expanding coverage with each issue. Congratulations—and keep in touch.

William F. Nolan

Coronado, California

BURIAL REQUEST

... I would appreciate it if STARLOG would strive to analyze what it publishes before it is printed. STARLOG must be careful not to give equal space to good and bad current sci-fi or even to old sci-fi without mention of any bad aspects so as to prevent constructive criticism for the future. STARLOG should bury bad sci-fi, not praise it.

Mark Garrett

Fort Worth, Texas

STARLOG makes no pretensions of being the final arbiter of quality presentations in science fiction; our general policy calls for ignoring the bad and covering the good. When you see a science-fiction production covered in STARLOG—whether it's a novel, comic book, movie, or TV show—it means that we thought it was worth including. (Of course, even on our staff there is disagreement as to what is good and what is bad.)

NOTES FROM READERS

... I'm just so happy with my STARLOG T-shirt! People come up to me all the time and ask, "What's STARLOG?" Now I need some information. What is Mr. Spock's full Vulcan name? In one episode he states that it's too complicated for a human to say.

Gentry Schmicker

Vero Beach, Florida

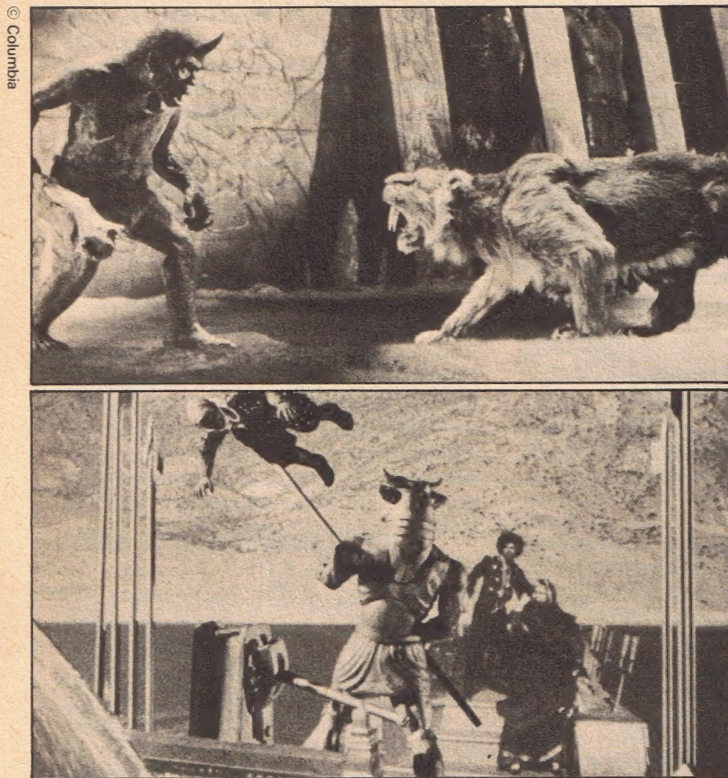
Our STARLOG T-shirts are growing in popularity as the magazine is discovered by more and more science fiction enthusiasts. They're real hits at conventions and certainly the most unique shirt around. Now, as to Spock's name ... evidently it is too complicated for a human to think, much less say. The truth is, none of the Star Trek writers ever devised an acceptable name beyond the one we all know and love.

Because of the large volume of mail we receive, personal replies are impossible. Comments, questions, and suggestions of general interest are appreciated and may be selected for publication in future Communications. Write:

STARLOG Communications
180 Madison Ave. Suite 1503
New York, N.Y. 10016

LATEST NEWS FROM THE WORLDS OF SCIENCE FICTION

LOG ENTRIES



STAR OF SINBAD—SPECIAL EFFECTS

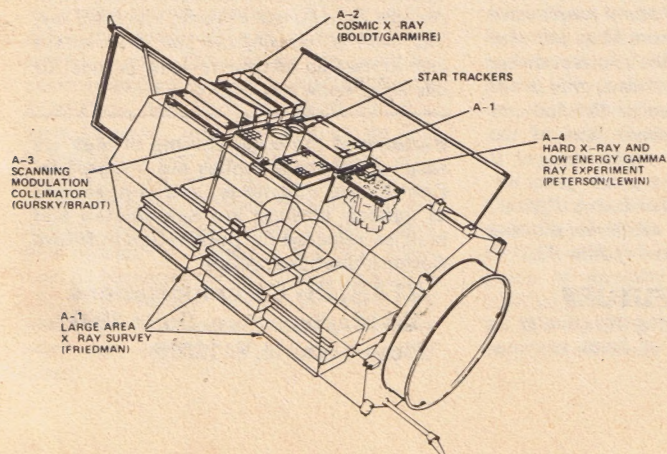
Soon to be in major release throughout the country is Charles Schneer's and Ray Harryhausen's eleventh feature film, *Sinbad and the Eye of the Tiger* (see Log Entries, *Starlog* No. 5). Distributed by Columbia Pictures, the fantasy tale incorporates many new film techniques. Cinematographer Ted Moore (*A Man For All Seasons*, *James Bond*), shot the production with Eastman color negative film 5247. "We were delighted with the results," said Moore. "I noticed far better definition than we had ever gotten before." Through the use of a combination of stop-motion photography, travelling mattes, and his three-dimensional Dynarama process, Mr. Harryhausen's latest creations seem to be the most menacing and life-like yet. "Here's where the fine film grain of 5247 on the live-action sequences pays off," says Harryhausen. "Because even after I lay on all my multiple optical effects, it still delivers a print that looks like a first-generation print. I've also found that Eastman color TV print film, made for British television, is ideal for my kind of work because of its low contrast characteristics." Charles Schneer sums up: "Kodak's latest developments have given a new potential to Ray's fantasy sequences, which together with our original casting and use of exciting locations, should make *Sinbad and the Eye of the Tiger* our most sophisticated film to date—and hopefully, a world-wide box office smash."

NEW STEREO OF OLD KONG

Composer Max Steiner is one of the legendary giants of American film music. During the thirties, forties and fifties he was probably the most sought after composer in Hollywood, chalking up well over 200 scores before the contemporary rock trend of the sixties left his grand, orchestral style out in the cold. His first major score was also a landmark for the industry: RKO's 1933 version of *King Kong*. Steiner's music was romantic and haunting, mysterious and adventuresome. A couple of suites from this

score have been recorded and United Artists did a whole album based on the score (see *STARLOG* No. 2, "The Music of the Spheres"). Now the renewed interest in the giant ape and his adventures have spurred the Entr'acte Recording Society to produce a new recording (ERS-6504) of the original Steiner score that is without a doubt the most authentic and most exciting. Conducted by another Hollywood musician, Fred Steiner (no relation), who also worked on the *Star Trek* series, the music is just as you remember it in the black-and-white version, but with all the impact of stereophonic sound. Unfortunately, plans to release a quad version were ditched.

LAUNCH ENERGY DETECTING SATELLITES



NASA's first High Energy Astronomy Observatory, HEAO-A, is scheduled to be launched into earth orbit around the fifteenth of April. This inaugurates a three-mission program to study some of the most intriguing mysteries of the universe: pulsars, quasars, exploding galaxies, and black holes in space. The first satellite will carry instruments capable of detecting and mapping x-ray sources (such as pulsars and black holes) with greater accuracy than ever before. HEAO-A will use a gas thrust reaction control system to insure that its solar arrays will face the Sun at all times to provide electrical power. It is expected that the radiation data collected by the observatories will lead to a better understanding of how extreme high energies are generated in space, how basic elements are formed, and how the universe evolved.



From the pilot episode of *Logan*: Gregory Harrison as Logan; Heather Menzies as Jessica; Keene Curtis as Draco.

Photo: C.B.S.

CBS CONFIRMS *LOGAN*

Logan, tentative working title for CBS-TV's new fall series, has begun filming at M.G.M. Television. The opening segment of the hour-long dramatic series deals with the escape of Logan and Jessica from the Dome City and their flight to sanctuary through the wilderness of the post-nuclear-holocaust 23rd century. They are pursued by the Sandmen from the Dome City who wish to capture and terminate them. The series opener stars Gregory Harrison as

Logan with Heather Menzies as Jessica. The first adventure leads them into Robot City (all humans have long since died and only the robots remain) where they are met by Rem (Donald Moffat) and Siri (Lina Raymond). Rem becomes the robot companion to Logan and Jessica in their adventures. Beyond the pilot three episodes have been scripted, the first entitled "The Thunder Gods" was co-written by William Nolan and Dennis Etchison. The pilot also stars Keene Curtis as the robot, Draco. The series is produced by Ivan Goff and Ben Roberts and directed by Robert Day. CBS has slated its debut for Sept/Oct of 1977.

HOLOGRAMS ON DISPLAY

"Through The Looking Glass" was the name of the first show at New York City's 80th museum, The Museum of Holography. As we mentioned in 3-D, part 2 in Starlog No. 5, the exhibition featured 60 holograms giving a complete survey of the history and state-of-the-art. The imaginative display was designed by the museum's director "Posy" Jackson and included most varieties of holograms: pulsed laser, transmission, reflection, 180 degree and 360 degree white light integral holograms. Particularly delightful were Bob Schinella's "Negative Space," which the museum notes is one of the finest examples of a projected image in existence and one of the earliest to use the pseudoscopic image; and Eugene Dolgoff's "Hypercube," a 360 degree white light integral hologram, which displays a computer generated 3-D representation of a *four-dimensional* hypercube. Fans of Robert Heinlein's *And He Built a Crooked House* will be particularly intrigued by this

display. The next exhibition features the works of Harriet Casdin-Silver. Mrs. Silver has collaborated with Steve Benton (the inventor of the *white light transmission* hologram) on a number of works that have been previously exhibited by the museum. This will be her first solo, May 3 through July 24. One of the most popular and intriguing of holographic effects will open at the museum on September 7 through Nov. 27—holographic movies. A limited number of holographic movies are in the current exhibition, but the most spectacular, "Mystery," is currently shown by appointment only. "Mystery" by Bonnie Kozek is the world's longest holographic movie to date, 2½ minutes. It is unusual for its use of standard motion picture techniques such as cuts and zooms. If you are in the city this spring and summer, the museum is open from noon until 6 P.M., Wednesday through Sunday. Admission is \$1.50. For further information about the exhibits, purchase of holograms, books, etc., write: Ms. Rosemary Jackson, Museum of Holography, 11 Mercer Street, NY, NY 10013.



CHRIS LEE IN ALIEN ROLE

Christopher Lee (most famous for his Count Dracula portrayals) is now doing SF. His newest film, *Alien*

Encounter, will be finished this year. To date, no American distributor has been chosen to release the Canadian movie here in the States, but the producer—Hal Roach Studios—is confident that there will be no problem once the final cut becomes available. At the moment, novelization rights are being negotiated, and other promotional techniques are in the works. *Alien Encounter* stars Robert Vaughan as an Earthman who is kidnapped by alien beings and taken aboard their flying saucer. His captors turn out to be friendly, and they—members of the League of Races—request his aid against their deadly foes, The Legion of The Winged Serpent. As one might expect, Chris Lee is the leader of the evil group, which is determined to conquer our planet. Ultimately, Earth unites with the good extraterrestrials against the Legion, and a massive space battle determines the fate of all involved. Written and directed by Ed Hunt, *Alien Encounter* is produced by Mr. Hunt and Ken Gord. Special effects and technical designs were done by Warren Keillor, and these promise to be really impressive. There are saucers and other spacecraft, interstellar battles, explosions on the Moon, skirmishes over Earth cities, saucers crashing into buildings, and a plethora of other exciting events. Reminiscent of Ray Harryhausen's epic, *Earth vs. the Flying Saucers*, this may be even better because of the two opposing factions, and the fact that the movie is in color.

SIX MILLION DOLLAR HASSLES

Universal Television's *The Six Million Dollar Man* and *The Bionic Woman* have been having some problems lately. The show business newspaper *Variety* recently headlined that Lee Majors notified Universal that he will not return next season to star in *The Six Million Dollar Man*. His wife, Farrah Fawcett-Majors, has also told Spelling-Goldberg Productions that she does not intend to return to *Charlie's Angels*. The husband-wife team has formed their own company, Fawcett-Majors Productions, to make films theatrically and for television. *Variety* also stated the present legal hassles between Harve Bennett (the executive producer of *The Six Million Dollar Man* and *The Bionic Woman*) and Universal TV: "Producer Harve Bennett, who walked out of his Universal job last November 8, claiming U-TV had breached his contract, has returned to the studio, but only to 'lift the cloud' on his ability to make a deal elsewhere. So said Bennett's attorney, Michael Rosenfeld, charging U-TV had written all studios and networks

indicating they had a right to suspend and had suspended the exclusive terms of Bennett's contract to last November 11. Questioning that U had that right, the attorney said nonetheless the Universal letters 'put a cloud on negotiations, so that people couldn't make a deal. It had a substantial effect in point of fact because of Universal's power in the industry. People are very reluctant to get into any kind of dispute with Universal.' "Reportedly, Bennett gets 25% of both series' profits. However, "with their calculations it would be very difficult if not impossible to get profits from them," attorney Rosenfeld said. It is unclear how these possibly monumental setbacks will affect next year's editions of *The Six Million Dollar Man* and *The Bionic Woman*. Both programs will undoubtedly return, with or without their original casts and production staffs. If Lee Majors is sincere in his wishes not to regularly continue as Steve Austin, the 77/78 television season will probably be *The Six Million Dollar Man*'s last. If this occurs, rumor has it that ABC will then initiate a *Bionic Boy* tele-series. As tentatively planned, Majors would guest-star on the show about once a month.

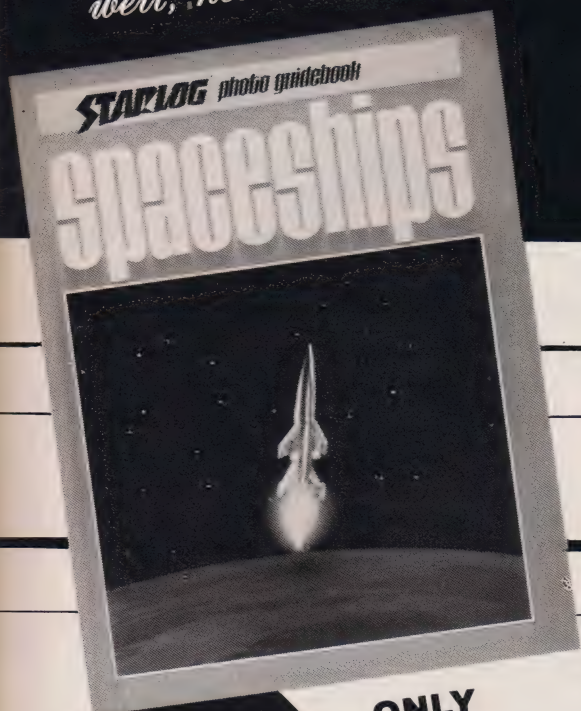
(Peter Purol) left with NASA Administrator Dr. James. C. Fletcher.



VIKING EMBLEM DESIGNED BY 17-YEAR-OLD STUDENT

When the Viking spacecraft touched down on the surface of Mars it signaled the beginning of Mankind's greatest adventure. The Viking probe represents the first step in a long series of proposed planetary explorations. It is expected that such missions will help to determine how life originated in the solar system, how our sun system evolved, and whether or not we, as sentient beings, are unique in the universe. A year before the Viking/Mars Lander embarked on its epic quest NASA, in cooperation with the National Science Teachers Association, sponsored a "National Viking Student Emblem Contest." The winning entry was submitted by Peter P. Purol, a 17-year-old high school student from the Dundalk Vocational Technical Center in Baltimore, Maryland. As winner of the contest, Peter was a special guest of NASA at the Viking launching from Kennedy Space Center in Florida. His winning design was carried to Mars on the outside of the lander.

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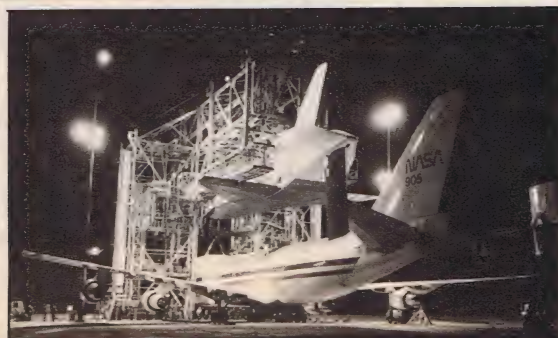
THE ENTERPRISE IN ACTION

Each week STARLOG receives hundreds of requests from readers for pictures and follow-up news on the Space Shuttle Orbiter program in general, and the *Enterprise* in particular. NASA scientist Jesco von Puttkamer, who is working as technical advisor on the *Star Trek* movie, is well aware of the widespread interest in the Space Shuttle *Enterprise*. He was kind enough to supply STARLOG with the accompanying photo materials.

2.



3.



4.

Attention: NASA is still in the process of recruiting potential future astronauts. Applications for the Astronaut Candidate Program are available through June 30th, 1977. You must specify whether you are applying as a Pilot or a Mission Specialist. Mail application requests to:

**CODE AHX
JOHNSON SPACE CENTER
HOUSTON, TX 77058**

In addition, throughout the 1980s the Shuttles will have approximately four empty seats per mission. These will be filled with Civilian Payload Specialists, at least 1,000 of whom will take the trip during the next decade. Applications for the CPS program are not yet available. STARLOG No. 8 will feature a full examination (with color illustrations) of this rare chance to get into space.

1. This is an artist's conception of the Space Shuttle coming in for a landing after an orbital mission. It re-enters the Earth's atmosphere at or above the speed of sound; at an altitude of approximately 55,000 feet, it goes subsonic and levels off. The aft engines are used for maneuvering in orbit only—its descent will be that of a controlled glide.

2. For testing, the *Enterprise* had to be moved 35 miles southwest from the Rockwell International assembly facility at Palmdale to the Dryden Flight Research Center at Edwards, California.

3. The shuttle is 122 feet long, has a wing span of 78 feet and a vertical fin that extends 57 feet into the air. Telephone poles, street lights, overhead wires and road signs had to be moved to allow the huge craft to pass through the desert community of Lancaster. The 90-wheeler transport vehicle traveled at a sedate five miles per hour while carrying its massive cargo.

4. Throughout this year, the Space Shuttle will undergo approach and landing tests at Dryden. It will be carried by a 747 to altitudes of 25,000 feet where it will be air-

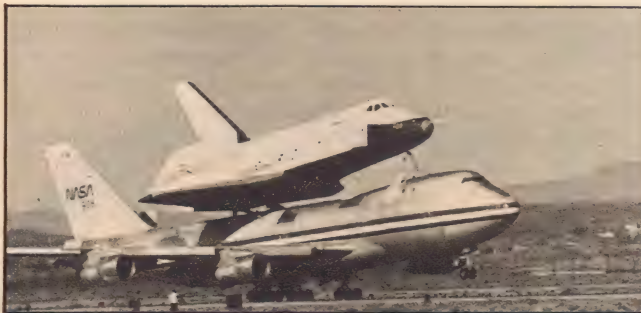
launched for free flight. For coupling, the *Enterprise* had to be hoisted in a specially designed mating facility while the 747 was towed underneath. The Shuttle was then lowered and mated to the 747 at three attach points.

5. The mated pair was then taxi-tested on the runways of Edwards Air Force Base. They taxied at speeds of 90, 140, and 157 miles per hour. The 747 nose wheel cleared the runway by about five feet on the third test.

6. This is the NASA crew that flew the 747 during the Shuttle's "piggy-back" flight testing. From left to right: pilot Fitzhugh Fulton, Jr., flight engineer Victor Morton, and pilot Thomas McMurtry.

7. An historic moment: the mated pair on its first test flight over the Mojave Desert of Southern California. They reached an altitude of 16,000 feet to determine performance and handling. Five more captive flights will follow.

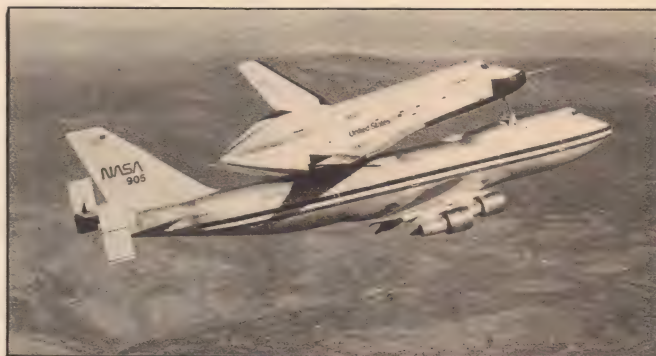
8. Here the pair comes in for a landing at Edwards following its first successful captive flight on February 18, 1977. The schedule calls for manned free-flight tests to begin in late July '77.



5.



6.



7.



8.

NOTICE: TO ALL DEALERS

Due to the gigantic number of letters from readers requesting information on all kinds of products, STARLOG is preparing a future edition of our Science Fiction Address Guide which will be devoted exclusively to MERCHANDISE. If you own a book store, a memorabilia shop, or a mail order business . . . if you

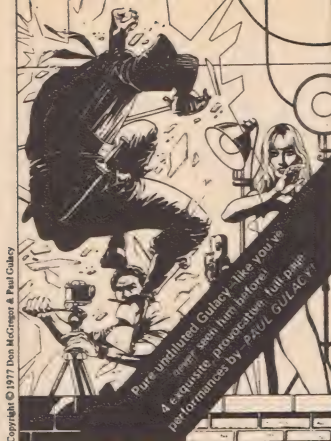
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CORRECTION AND APOLOGY

In the "Science Fiction Address Guide to Television" (STARLOG No. 5, page 31) we mistakenly credited Reg Hill and Brian Johnson with the special effects for *Supercar*, *Fireball X-L5*, *Thunderbirds*, *Captain Scarlet* and *UFO*. This is incorrect. Mr. Derek Meddings is the person responsible for the brilliant special effects on all of those I.T.C. shows. Our sincere apologies to Mr. Meddings and to our readers.

NEXT ISSUE:
STARLOG No. 8
on sale
THURSDAY, JULY 14, 1977

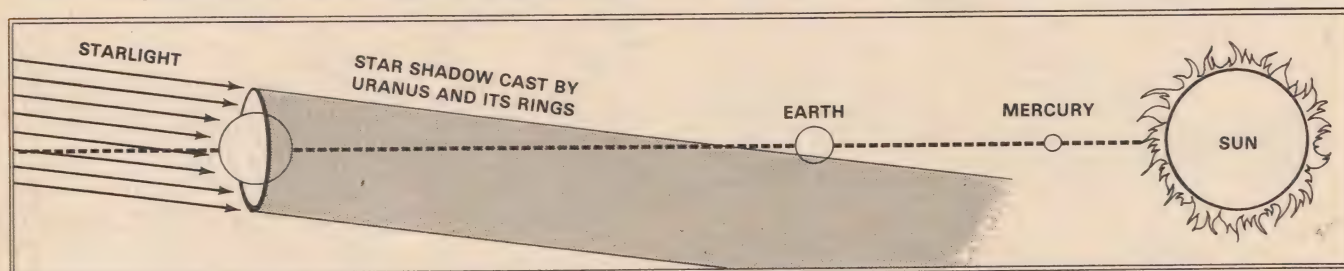


DRAGONFLAME And Other Bedtime Nightmares

NEW FROM MCGREGOR AND GULACY

Fictioneer Books has released an oversized first edition paperback by SF and fantasy author Don McGregor. Don wrote for Marvel Comics' *Killraven* science-fiction series, but this collection of stories, called *Dragonflame and Other Bedtime Nightmares*, represents a radical departure for him

in theme and style. "Dragonflame" is a contemporary piece set in a present day Manhattan that seems like Armageddon. It features accompanying full-page illustrations by artist Paul Gulacy, known for his work on Marvel's *Shang Chi*, *Master of Kung Fu* title. Dragonflame "is a man whose past has died, and who now exists in complex shadows of various depths." He has been brutalized, victimized, betrayed and alienated, and is now a dark revenger who can no longer turn his back on the violence erupting about him. "The Variable Syndrome" is an erotic SF novelette that features timetravel theorems, maddening biological architectures, psychokinetic serpents, mind invasion, and other pleasant encounters. "The Mating Massacre" is a dark fantasy about gods, sex, doom prophets, and ends up as an incredible cosmic joke with an extremely long punchline. "The Play It Again Sam Casablanca Blues" is a romance experience, updating the eternal triangle theme, complete with passion and torment and fervor, and focusing on a very special woman who is clearly a vibrant empath. There are other stories in the collection, including mainstream and cultural pieces. Personal introductions precede each piece and focus on comics and other media among their wanderings. The book can be ordered from Fictioneer Books, Ltd., Lakemont, Georgia 30552 for \$5.25 (including postage).



SCIENTISTS FIND RINGS AROUND URANUS

The second week of March produced a startling, new scientific discovery. *Science News* magazine published the story under the headline "Belt of Satellites Discovered Around Uranus." Stating that "apparent signs of a whole new belt of satellites—perhaps as many as 18 previously unknown moons" around Uranus had been observed, the article went on to speculate that they may be "just a part of a system of rings circling Uranus." Further study of the data confirmed that the objects were a series of at least five rings in a narrow belt, about 4400 miles wide. Dr. James Elliot, senior research associate at Cornell University's Center for Radiophysics and Space Research, made the discovery March 10 while aboard NASA's Kuiper Airborne Observatory observing the temporary disappearance of a faint star (SAO-158687) behind Uranus. The nature of the mission was to learn the planet's precise diameter and to study the composition and temperature of its atmosphere by recording changes in light intensity from the star as it passed near and then behind the planet. Discovery of the

planet's rings was an unexpected benefit. According to Elliot and his associates, the five rings lie 11,000 miles from the cloud tops of the planet. They appear to consist of four inner rings, perhaps six miles across, that follow nearly circular orbits around the planet, and one thick outer ring, about sixty miles wide, whose orbit may not be exactly circular. These rings are considerably smaller than those encircling Saturn. Elliot's data indicate that they are probably made up of fragments smaller than one mile in diameter. Uranus is unique in that it "lies on its side" with its rotation axis almost in its orbital plane. This unusual position of the planet was instrumental in allowing scientists to observe the full extent of the rings. (See accompanying diagram.) The rings have never been observed before because the light reflected from Uranus is sufficiently bright to obscure the lesser reflections from the rings under normal viewing conditions. Elliot has named the rings for the first five letters of the Greek alphabet: alpha, beta, gamma, delta, and epsilon.

WIZARDS IN FULL DISTRIBUTION

Ralph Bakshi's *Wizards* premiered nationwide the week of April 25 after being test-marketed in a few key cities for several weeks. Bakshi's new animated feature is an apocalyptic vision of the Earth in the far-flung future. The film is at its best when Bakshi allows his creations—elves, fairies, mutants and magicians—to get involved in playful diversions. When the action serves to develop the plot, however, we're often left with a confused montage of images running helter-skelter. The animation itself has highs and lows, although *Wizards* is still the best animated package since the days of the old Fleischer and Disney studios. And the artwork, for the majority of the film, is spectacular.



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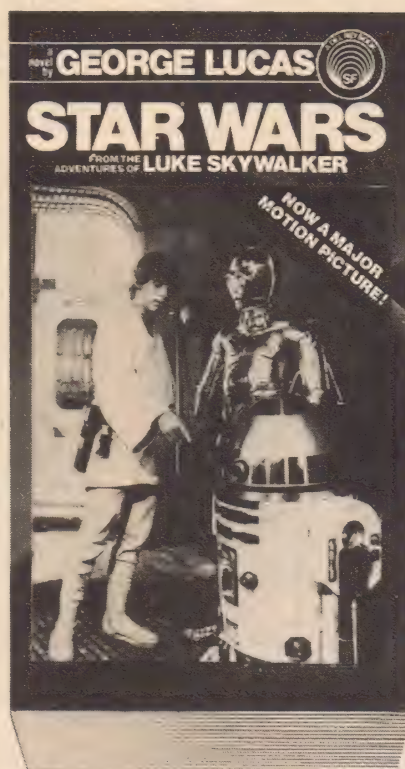
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VOYAGE TO DARKNESS

When the Moon totally eclipses the Sun on October 12, passengers on two Sitmar Cruises' ships, the T.S.S. *Fairwind* and T.S.S. *Fairsea*, will be in the best possible location for viewing this rare celestial phenomenon. They'll be on ships positioned approximately 1200 miles southwest of Los Angeles on the path of the total eclipse. Highly maneuverable, with a top speed of 21 knots, *Fairwind* and *Fairsea* will rendezvous in the area providing the clearest

skies and calmest seas. To help in final positioning, experts on board both ships will be receiving the latest satellite weather data from the U.S. satellite center in Redwood City, California. Departing first en route to the eclipse rendezvous point will be the 25,000-ton *Fairwind*. She sails from Port Everglades, Florida on October 1 and calls at Cartagena, Colombia and Balboa, Panama before arriving at the eclipse viewing site on October 12. Following the eclipse, *Fairwind* will visit Puerto Vallarta before terminating her 17-day cruise in Los Angeles. *Fairsea* will depart on her "Voyage to Darkness" on October 8. She'll join her sister ship along the eclipse path four days later and will then call at Mazatlan and Puerto Vallarta before returning to Los Angeles on October 19. Both Sitmar voyages will provide passengers with a broad range of scientific and educational opportunities. Included will be lectures, seminars, and mini-courses in astronomy, astroarcheology, modern exploration, geology, meteorology, navigation, oceanography, photography and marine biology. All sessions are free of charge. Further information on Sitmar's two "Voyages to Darkness" can be obtained through professional travel agents.



NEW SPACE COMEDY IN PRODUCTION

Richard Benjamin will star in *Quark*, a science-fiction comedy development project now in production for NBC-TV. Benjamin portrays Adam Quark, commander of a spacecraft in the year 2222 A.D. with a priority mission: "clean up the garbage in the Milky Way." Also starring in the half-hour comedy are Tim Thomerson as chief engineer Gene/Jean, a "transmute;" Conrad Janis as Otto Palindrome, chief architect of Space Station Perma One; Douglas V. Fowley as O.B. Mudd, research specialist; and Patricia Dale Barnstable and Priscilla (Cyb) Barnstable as co-pilot and co-co-pilot Betty I and Betty II. Guest starring are Alan Caillou as The Head, director of Perma One; and Misty Rowe as Interface, a telephone operator with four arms. Buck Henry is writer and producer of *Quark*. Peter Hunt is the director and David Gerber is executive producer for David Gerber Productions, in association with Columbia Pictures Television.

"Cleaning up the Milky Way" as conceived by artist Howard Cruse.

NASA HIRES NICHOLS TO RECRUIT

NASA has awarded a contract totaling \$49,900 to the Women in Motion Production Co., Los Angeles, California, for the service of acquainting potential minority-group applicants with the opportunities available



to them in the Shuttle Astronaut Recruitment Program. Under the terms of the contract, Ms. Nichelle Nichols (Lt. Uhura), will be available for contacting community organizations, colleges, institutions and individuals to familiarize them with the requirements for qualifying as Space Shuttle astronauts. Ms. Nichols is the executive vice president of the contracting firm. Her duties under terms of the agreement will include contacting students at minority and non-minority schools at the college and university level. In addition she will seek appearances on major programs broadcast by major television networks. "We want to make sure that the recruitment is brought to the attention of minorities and that the word gets around that NASA really wants to get applications from qualified minorities and women," an agency official explained. "We feel Ms. Nichols is uniquely qualified to do this." Nichelle will establish personal contact with NASA officials charged with astronaut recruitment so she will be familiar in detail with the status of the applications and have a firm understanding of the functions and duties of Shuttle crew members. Nichelle is a member of the board of directors of the National Space Institute, Arlington, Va. Her activities under the contract will be concentrated in the months before June 30 this year, the last date for filing applications in the current Shuttle crew recruitment program.

L.A. CON DRAWS BIG NAMES, YIELDS BIG NEWS

There's an obvious advantage to attending a con in Los Angeles: you're in the movie capital—where the real costumes, props, SFX men, actors, directors, producers and writers are. While this con had its dominant share of *Star Trek* films and items for sale, the panels and programs featured mainly other fare—from which came some up-to-the-minute news of current SF projects in Hollywood.

The all-time winner on the applause meter was the presentation and panel on *Star Wars*. **Charles Lippincott** narrated the story while slides and a film trailer showed key scenes. Mark Hamill, who plays Luke Skywalker in the film, said, among other things: "I was really lucky to get this part. I've been a science-fiction fan for years. I used to read *Famous Monsters*; I've attended several cons just as a fan!" Indeed, Mark was first spotted at the convention as he was making the rounds of the dealers' tables. SFX man **John Dykstra** and producer **Gary Kurtz** answered questions about effects, miniatures, sets and costumes. Lippincott revealed the latest tidbit: the music score by *Jaws*-composer **John Williams** will be released this spring in an unprecedented (of recent years) two-record set! By popular demand, the *Star Wars* trailer was shown again at the conclusion of the session and gathered even louder cheers than it had the first time. **Jared Martin**—Varian on the TV SF *Fantastic Journey*—said he particularly enjoys his role because it's TV's only non-violent hero. "Varian is *you*," he told his audience, "as fully realized three centuries from now." Only Martin's honesty kept him from being cornered by some of the more persistent questioners. While stressing his appreciation for the basic ideas of the show, he admitted that much of the plot and characterization was insufficiently worked out. He said that perhaps the greatest "bug" was the inconsistent use of the "time portal" that takes the characters from one story to the next. Critical as his audience seemed to be, there was a loud moan of disappointment when he said that the show would likely not be picked up for the fall schedule on NBC. "The network has convinced itself that there just aren't enough science-fiction fans out there to keep such a show going," he said. Asked what the fans could do to help, he first quipped, "Send money," then suggested that letters to NBC at 30 Rockefeller Plaza, New York City, might still do some good.

Christopher Lee, the British actor of *Dracula* fame, was a witty, friendly, engrossing speaker. He reaffirmed his resolve never to play *Dracula* again. "The character has so deteriorated through the years. Bram Stoker's character has never been done properly on the screen." Mr. Lee is currently working on two movies at the same time. He's excited to be working for Disney Studios co-starring with Bette Davis in the SF sequel *Return to Witch Mountain*. "We play a somewhat bizarre pair; she's after the money and I'm after the power." He's also at work on *Time Wall* with Jose Ferrer, Arthur Kennedy and Sue Lyon. This SF feature was originally titled *The End of the World*. Said Lee, "I'll be playing, strangely enough, a priest." His big surprise announcement was that he'll be singing the lead role in a rock opera film, *Mephistopheles*. (How devilish can he get?)

Ray Harryhausen, famed animator of the *Sinbad* and other Dynamation features, received a standing ovation upon his arrival at the speaker's platform. About his new film, *Sinbad and the Eye of the Tiger*, he said, "We always try to come up with something different. There are eight or nine new creatures in it we hope you will enjoy." He said the film has completed its shooting in Spain (for the North Pole sequences), Malta, and Jordan (Lost City of Petra sequences), and should be ready for release this summer. Highly technical questions came from his very young

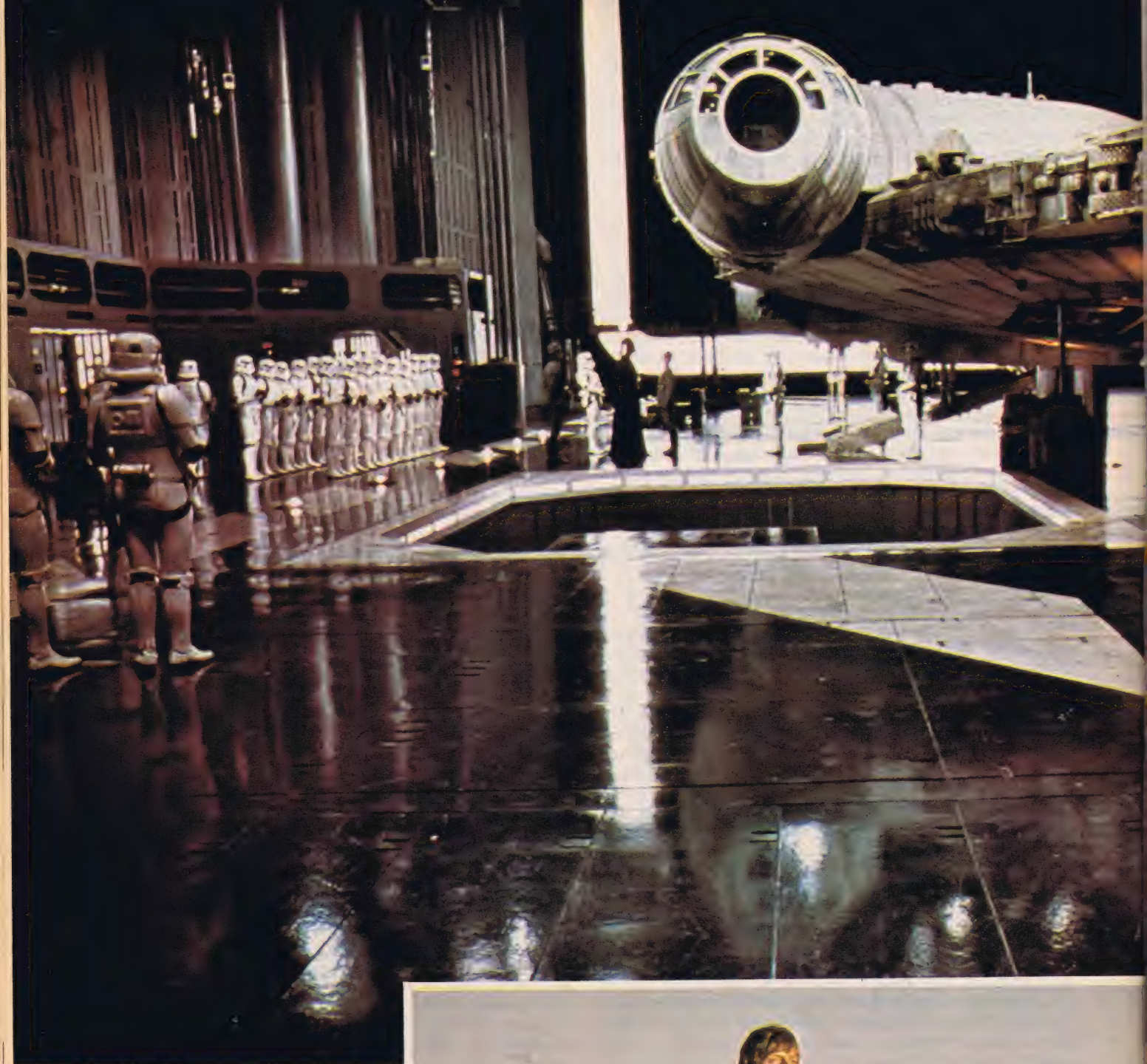


Photos: David Houston

Christopher Lee autographs for fans; Mark Hamill visits the STARLOG table.

audience. Asked about a skeleton battle, Harryhausen explained that one shot of seven skeletons walking toward the camera progressed at a rate of only 13 frames per day! One youngster of about 10 years asked, "How did you get started in special effects—because I'm interested in your job." The audience chuckled, but Harryhausen quite seriously explained that the original *King Kong* had been his inspiration and that he learned all he could, considered his work only a hobby at first, then began trial-and-error experiments. The convention's most imposing guest speaker was Robby the Robot. The mechanical star of *Forbidden Planet* and other films and TV shows lumbered into the huge auditorium from a side entrance, his lights flickering, his head turning. The first question: "Is there a man inside?" "Not a man," the robot answered, "say rather a bio-plasmic anthropomorphic insert." When his lid was unscrewed and removed, there emerged the head of **Bill Malone**—builder and owner of this replica of the original MGM costume. Malone answered questions about the weight, cost, construction, and history of Robby, and told of his more recent projects: he has just completed an exact working copy of the gleaming feminine robot from *Metropolis*; next he will replicate the arch-villain of *Star Wars*, Darth Vader. **Ray Bradbury**—world famous author of *The Martian Chronicles*, the 3-D movie *It Came From Outer Space*, and much more—entertained his audience with some of his recent poetry. The first concerned the doom-sayers of literature who have outlived their welcome. To carry end-of-the-world pessimism to its absurd conclusion, he said he was planning to "write a big bestseller called *1985 Will Be Worse*." He said that he has just been asked by Playboy Magazine to write an article on NASA's new plans to send a solar kite to study Halley's Comet. ★





Above: One of the truly enormous and spectacular sets created for the film—a hangar aboard the *Death Star*. On the right is Solo's freighter, the *Millennium Falcon*.

Right: Luke Skywalker (Mark Hamill) on his home planet of Tatooine. Behind him is a vaporator used to bring moisture to the arid desert land. Instead of repairing it, Luke watches a fight in space.





If you're among those who would rather see a new movie "cold," save these pages until after you've seen *Star Wars*. If, on the other hand, you want to know why and how the film was made, if you're curious about location filming in the Tunisian desert, special problems the production encountered and solved, who designed Chewbacca and why the alien costumes weren't good enough at first, whether the robots conform to Asimov's laws, how to make a Bantha, what literature and culture influenced the writer, how some of the special effects and settings were accomplished, who the actors and characters are and what they'll be doing, and sundry other bits of data . . . then read on . . .

CREATING THE SPACE-FANTASY UNIVERSE OF

STAR WARS

By DAVID HOUSTON

Star Wars is a legend ahead of itself.

Prior to the film's Memorial Day premiere, the screenplay was published in the form of a Ballantine science-fiction novel; on the basis of only a few released stills, the *Star Wars* production office was being deluged by requests (all denied) from collectors; after seeing only a few completed sequences, 20th

From an interview with Charles Lippincott, ex-USC film student, ex-teacher, ex-non-union filmmaker of all sorts, ex-MGM publicist, ex-Hitchcock co-worker on "Family Plot," current member of the Los Angeles FILMEX selection committees, and Vice-President of Star Wars Corporation in charge of advertising, publicity, promotion and merchandising.

Century-Fox moguls had already begun to seek a commitment for a sequel; Alan Dean Foster had completed a second story that could form the basis of such a sequel—and it had already been sold as a novel; *The Making of Star Wars*, an illustrated book by Charlie Lippincott, had also been sold and will be published this summer; the Marvel Comics version of the story had hit the stands in March and was selling well; an enormous toy and model-kit deal was being finalized; there were negotiations underway for a TV series based on *Star Wars*. . . and while all this was going on, only a handful of people had seen the movie!

What is this movie? Can it possibly live up to expectations?

Star Wars is a new \$10 million

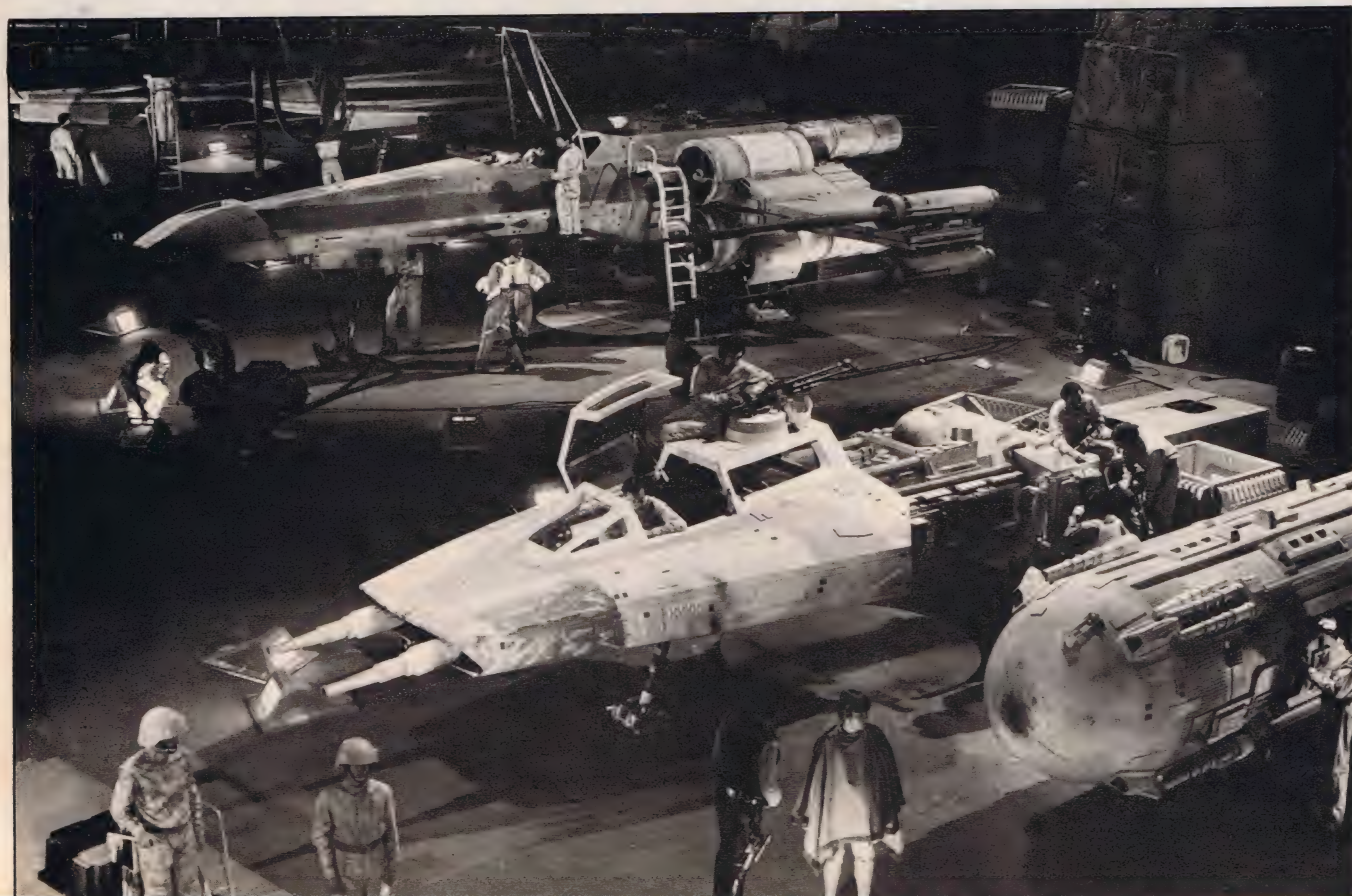
science-fiction film made by Gary Kurtz (producer) and George Lucas (writer-director) and released by 20th Century-Fox. It stars Mark Hamill as farmer/astronaut Luke Skywalker, Harrison Ford as smuggler Han Solo, Carrie Fisher as Princess/Senator Leia Organa, Sir Alec Guinness as warrior Ben (Obi-Wan) Kenobi, Peter Cushing as villainous Grand Moff Tarkin, Peter Mayhew as Chewbacca the Wookiee, Dave Prowse as treacherous Darth Vader, and robots See-Threepio and Artoo-Detoo as themselves.

The story is set in another galaxy and time and concerns a valiant struggle against a totalitarian empire that is spread among the stars. The characters herein have never heard of Earth. Their



Above: Solo and Ben Kenobi (right) are amused as R2-D2 and Chewbacca play a chess-like game. C-3PIO is there to interpret for his friend and companion.

The rebel forces, gathered on the moon Yavin, prepare to attack the *Death Star*. The tiny X-winged craft will destroy the planet-sized war machine.



alien worlds and cultures, their dress and architecture, their technology, history and future (if any) are not of our world.

Even more than was true for *Star Trek* and *Space: 1999*, the universe of *Star Wars* is totally fabricated out of imagination. The fabricator is George Lucas.

He first got the idea for *Star Wars* six years ago—around the same time he was developing what would be his first box-office hit: *American Graffiti*. Lucas was a youngster then, not long out of film school at the University of Southern California and with only one feature to his credit—the now famous, little science-fiction understatement—*THX 1138*.

At one point, one studio was interested in both projects; much of the development money for both *Graffiti* and *Star Wars* came from Universal. Finally Universal picked up *Graffiti* but let *Star Wars* lapse. They could see that *Star Wars* would cost them twelve times what *Graffiti* would. (Ironically, the *Star Wars* post production office is located at the Universal complex, although it was ultimately 20th who commissioned *Star Wars*.)

FANTASY FOR A NEW GENERATION

"A lot of the success this film expects to enjoy will be due to Alan Ladd, Jr.," says Charlie Lippincott, a close associate of Lucas in the *Star Wars* office. "He's now president of the 20th Century-Fox film company, and this was his pet project. Without him, it probably would not have been made."

Lippincott says that Hollywood is just now shedding its old fogey-ness—as was demonstrated by the youthful production of the Academy Awards program this year, with young comics in place of traditional Bob Hope—and is waking up to the needs and values of a younger generation.

"It's fun—that's the word for this movie," writer-director Lucas told *The New York Times*, explaining why he developed the project. "It's for young people. *Graffiti* was for 16-year-olds; this is for 14-year-olds. Young people don't have a fantasy life anymore, not the way we did. All they've got is Kojak and Dirty Harry. There's all these kids running around wanting to be killer cops.

"Nobody except Disney makes movies for young people anymore. I want to open up the whole realm of space for them.

"Science fiction is okay, but it got so involved with science that it forgot the sense of adventure. I want *Star Wars* to make them think of things that *could* happen. I'd like them to say, 'Gee, wouldn't it be great if we could go run



Above: One of Ralph McQuarrie's pre-production paintings. Luke searches the desert for signs of danger while the robots wait by the 'hopper.

Below: Another McQuarrie painting—the Cantina scene in Mos Eisley. Aliens abound but Luke runs into trouble because they "don't serve droids."



around on Mars?!' Kids today seem to be having a very boring childhood."

Charlie Lippincott (incidentally, he and Lucas were school friends back at USC) explains their own classification of the film as science *fantasy*, not science fiction. "The only people we're going to offend are the die-hard science-fiction people who are into the whole idea that science fiction is what Hugo Gernsback said it was: dealing only with plausible science of the future on a fictional level.

"Our hardware is so fantastic as to be really impossible. We're not set in the future anyhow; our film is set in another galaxy and, as it says in the credits, it's in the *past*. It's a fantasy film, a space fairy tale. That's why we call ourselves space fantasy and not science fiction."

"IT'S A SPACE OPERA"

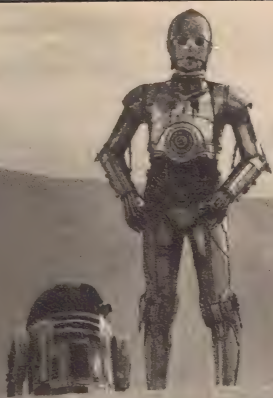
The story Lucas invented follows the Three Musketeers-like exploits of Luke Skywalker, a restless young farmer who lives with his uncle on the arid planet Tatooine—a place so useless the local inhabitants believe that the dictatorship swallowing up the rest of the galaxy is unconcerned with them. This proves not to be so, and Luke finds himself pulled into the resistance movement as its only

hope: he has with him—unknown to him at first—a robot that contains a message from a captured lady senator. The message includes information on how to cripple the *Death Star*—a moon-sized ship that carries enough weaponry to destroy planets (and does), that houses the seat of dictatorship, and that holds the senator prisoner.

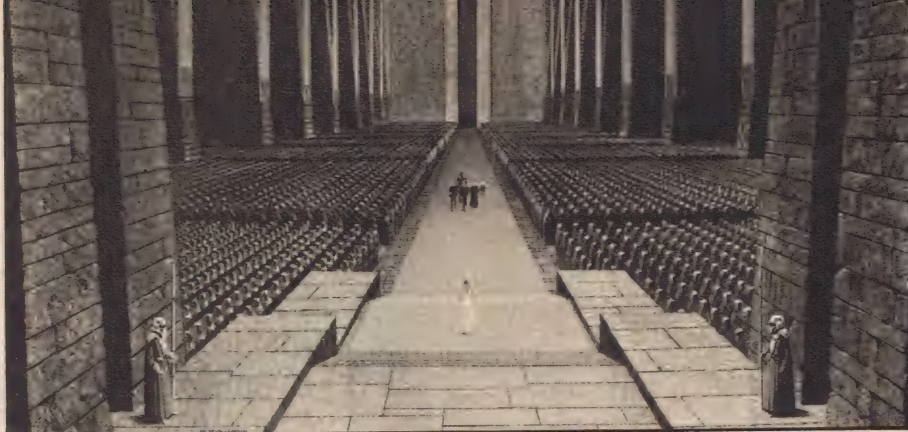
Luke's leader and mentor is old Obi-Wan Kenobi, among the last of the noble knights of the old order and among whose pupils were Luke's own father and Darth Vader, the right-hand axeman of the dictator. It was Vader, in fact, who killed Luke's father many years ago.

"The story has influences from all over the place," Lippincott says. "People have pointed out that they see suggestions of things from *Lord of the Rings*, or *Flash Gordon*, or *Dune*, and there are a lot of influences from outside science fiction—like the Samurai tradition of Japan. That's part of the basis for the film's Jedi Warriors, although I doubt that many outside of Japan will be too aware of it. Most importantly, the story relates to legend and fairy tale. It's what Grimm and Hans Christian Andersen were doing."

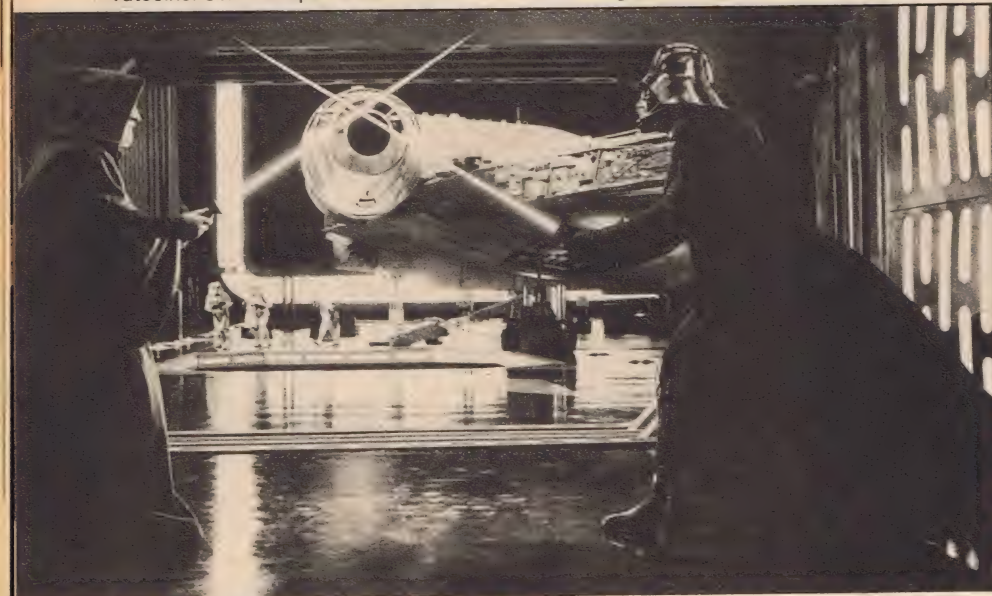
"It's space opera," Lucas freely admits.



Above: R2-D2 and C-3PIO are aboard a rebel cruiser when it's attacked. They take an escape pod and crashland in the desert of Tatooine. Stormtroopers follow them down.



Above: This is how artist McQuarrie envisioned the film's final scene: the triumphal return of the heroes to the rebel stronghold. The princess waits for them.



Above: Luke and Ben walk through the port town of Mos Eisley. They are looking for a space pirate who doesn't ask questions.

Left: Ben Kenobi crosses light-sabres with his former pupil (and current Dark Lord), Darth Vader. A classic confrontation.

DESIGNING THE PRODUCTION

Work began on the film back in 1975 when 20th gave the official go-ahead. Of top priority was the physical design of the picture. Lucas called together various design consultants and met with Los Angeles artist Ralph McQuarrie. McQuarrie turned out a sequence of breathtakingly beautiful paintings incorporating set, costume, and effects designs that formed the basis from which later designers worked. Many of the paintings were completed a full year before *Star Wars* began its 17 weeks of shooting. (Some of those paintings are reproduced here; two were reproduced in color in STARLOG No. 6; and another is the back cover illustration for the STARLOG Photo Guidebook to SPACESHIPS.)

Lucas had several important ideas that integrated the picture with regard to design, believability, and visual character. "George wanted the look of the show to be spectacular," Lippincott explains, "and for the hardware to be unfamiliar enough to continually suggest another time and place. But he was

also careful not to make it *too* different—because then the audience would be so wrapped up in the sets that they would not pay attention to the storyline."

Anyone who has read the *Star Wars* novel can appreciate the necessity for this; the plot moves extremely rapidly with ample twists and turns, like the melodramatic suspense thriller it is. "It's not a film one would want to come in on the middle of," Lippincott warns.

Lucas also insisted that the worlds of Tatooine, the *Death Star*, and the jungle satellite Yavin (filmed in Central America) have the look of *used* universe. So the smuggler's ship that's supposed to be a century old has grease smears, strafe marks from countless scrapes with the law, and meteorite pits. The buildings *look* lived in. Even on the allegedly newly built *Death Star*, there's evidence that the construction crew hasn't gotten around to cleaning up. And so on.

"These people have a life and history of their own," says Lippincott; "and we're just interrupting, momentarily, that life."

THE RECALCITRANT CAMERAMAN

To insure a sense of realism amid the spectacular imaginative trappings, Lucas hoped to utilize a documentary-style camera. Both Lucas and Lippincott had been impressed, back in their school days, with the style of Britisher Gil Taylor—who photographed *Repulsion*, *Hard Days' Night*, *Dr. Strangelove*, Hitchcock's *Frenzy*, and others: "To me," says Lippincott, "he was the best black-and-white cameraman of the sixties. Amazing guy. He was Polanski's favorite, and he was Hitchcock's favorite. Hitchcock wanted to bring him to America." (Lippincott worked with Hitchcock before joining *Star Wars*.)

"But Gil's head was in a different place altogether." The *Star Wars* cameraman saw the dark drama, the brilliant action, a creative use of color and wild camera angles. Now the finished product has a combined artistic/documentary look. "Gil never really produced the sort of documentary style George was after. Personally, I

don't think the film ever merited documentary," Lippincott says, reflecting. "I think George sees that in retrospect."

Home base for the production was the EMI Elstree facility in London, where approximately 30 sets were built on the eight rented stages (Elstree's ninth stage was being used by Paul McCartney's *Wings* group). The *Star Wars* company took over everything there—studios, stages, technical facilities, scene shops, prop storage—for three months prior to the commencement of filming. Their big deadline: to prepare for the desert planet scenes which were to be shot in Tunisia just ahead of the tourist season.

THE LITTLE ROBOTS THAT COULDN'T

"But they had problems with the robots and the sandcrawler," Lippincott explains, "and couldn't quite make it on time."

There are numerous robots throughout the film that serve the humans in various ways, and two of them are

actually major characters. See-Threepio (C-3PIO) and Artoo-Detoo (R2-D2) are mechanical sidekicks reluctantly devoted to each other—with very human personalities.

See-Threepio is a mildly effeminate public relations 'droid who speaks most of the languages of the galaxy and is given to frustration and sarcasm. He's made of gleaming gold metal and has a roughly humanoid appearance.

Artoo-Detoo is a squat little cylinder bristling with lights, sensors, and manipulating mechanisms, who is the feisty brains of the pair, and can speak only an electronic gibberish that has to be interpreted by See-Threepio.

According to Lippincott these are *not* men in robot suits. (There is one robot suit in which a man appears for perhaps three minutes of screen time.) Some of the robots are animated by various trick photographic means, but a number of them are real robots with internal motors and radio controls.

Lucas apparently hoped he could actually advance robot technology. He wanted his mechanical men to be the real thing. He sent his SFX expert, John Stears, to visit the top English roboticists—who told him sadly that what Lucas had in mind was just not

possible with the state of the art today. Compromises, time-consuming ones, had to be made.

"I think George was really disappointed that he did not beat the existing robot technology," says Lippincott. "But today's robotics deals with things that do not look like the robots of fiction—today's robots are things that put bottlecaps on soda pop and stuff like that. There are some experimental models—like the little robot up in Palo Alto, California, that used to run around and find its own power source, plug itself in, and feed itself. That's certainly unique, but it was just a gimmick, something they made for pleasure and to show off to other robotics people." (Artoo-Detoo performs a similar feat in *Star Wars*.)

Do the Lucas robots conform to Isaac Asimov's famous laws of robotics?*

*Isaac Asimov's three laws of robotics, formulated for the stories collected in *I, Robot*, published in 1950:

1—A robot may not injure a human being, or, through inaction, allow a human being to come to harm.

2—A robot must obey the orders given it by human beings except where such orders would conflict with the First Law.

3—A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.

Below: This awesome "sandcrawler" is the home of the nomadic sandpeople. They travel the desert dealing in used robots.





Above: C-3PIO, Ben and Luke in the Tatooine desert. While they were filming in Tunisia, Lucas finished rewriting the script—with an assist from Alec Guinness.

"As George says," conveys Lippincott, "anybody who's going to do robots nowadays is into science fiction and is going to be aware of Asimov's laws. George was certainly aware of them, but he was determined to work around them. What Asimov described was an ideal situation—what a robot *should be* within our culture. What is the case in *Star Wars* is humanoid robots with individual quirks, just like human beings have quirks. Both of our robots have their own ideas as to who their masters are and what their responsibilities are. So there can be conflicts between the two robots."

MORE TROUBLE IN TUNISIA

When the time came to pack up and head for Tunisia, the robots were not the only problem. From the *Star Wars* novel: "... two Banthas stirred at the approach of their masters. Each was as large as a small dinosaur, with bright eyes and long thick fur. They hissed anxiously as the two sandpeople approached, then mounted them from knee to saddle. With a kick Banthas rose. Moving slowly but with enormous strides, the two massive horned creatures swept down the back of the

rugged bluff. . ."

Every method considered seemed far too expensive a way to make a Bantha. Finally, they put off solving the problem and it was decided that the Bantha would be done back in the United States and the footage would be inserted into the Tunisia work. (Here, much later, they rented an elephant, transported it to the sands of the Mojave Desert, dressed and camouflaged it to look like a Bantha, and got the missing shot.)

From the novel: "Gravel and fine sand formed a gritty fog beneath the landspeeder as it slid across the rippling wasteland of Tatooine on humming repulsors. . ." How do you make such a craft when you don't actually have "repulsor" technology?

"It was a big problem," Lippincott confides. "Ultimately John Stears—who was head of production special effects—did it. He got a tri-wheel vehicle and completely redesigned around that. George still doesn't think it works completely, but I do. In some shots it really looks like it's floating in air. The problem was always that we couldn't use a hovercraft because it would toss up a cloud of sand and just cause all sorts of hell."



Above: One of the additional aliens designed by Ron Cobb for the Cantina sequence. This is an ambulatory plant creature, casually sipping a cocktail.



Above: Another of the rebels' T-65, X-winged fighters. What it lacks in defensive armaments it makes up for in speed and maneuverability; it almost looks real.

"No," he says, in answer to my question, "there was no problem with tire tracks—because," he adds, keeping the secret to himself, "it was rarely used with the wheels."

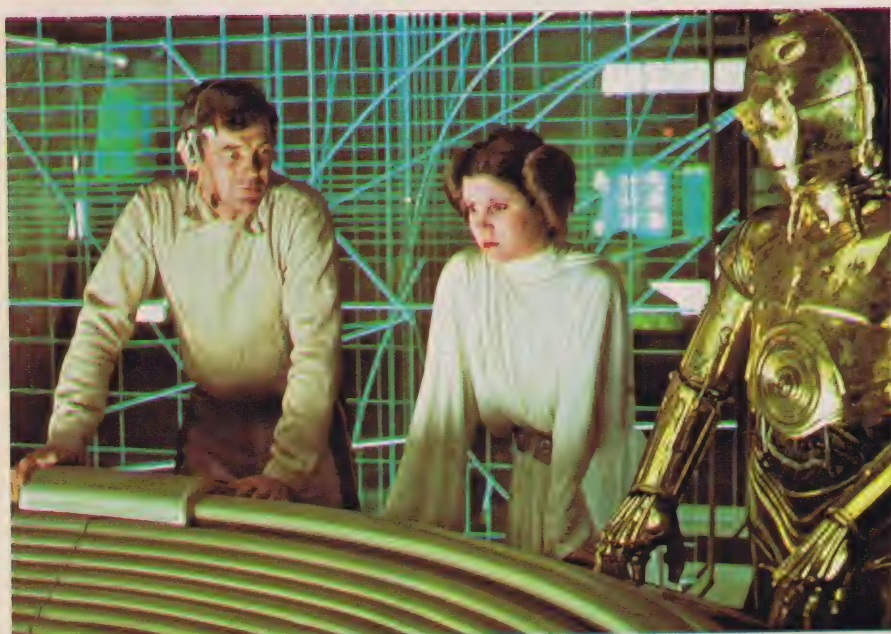
From the novel: "At the bottom of the canyon—like some monstrous prehistoric beast—was a sandcrawler as enormous as its owner and operators were tiny. Several dozen meters high, the vehicle towered above the ground on multiple treads that were taller than a man. Its metal epidermis was battered and pitted from withstanding untold sandstorms." It was found that building the sandcrawler full scale and transporting it to Tunisia was economically out of the question.

The solution: they built only about two stories of it, the bottom section with the tank-like treads, for Tunisia. There exists a complete version, but not in full scale; it was used in the United States for the creation of the insert shots. That complete *miniature* is four stories tall!!

So the crew was a bit late arriving in Tunisia and got there just as the tourist season was beginning. To make matters worse, they ran into terrible weather—cold, heat, wind, rain—dramatic condi-

Below: Chewbacca and Solo strike an intimidating pose. Having been captured by the *Death Star*, they prove themselves to also be proficient in dealing death.





Left: C-3PIO, Princess Organa and one of the rebel commanders anxiously await the outcome of the desperate raid on the *Death Star* from the safety of Yavin.

tions that might have been advantageous for some other film, but not for this one. Still, by working odd hours and making the most of the good days they did have, they left Tunisia only a few days off schedule.

CALLING ALL ALIENS!

The cantina sequence was also troublesome. To get it done, after just returning to London from Tunisia, the company went onto the French system of filming: the workday starts at noon and proceeds for an uninterrupted eight hours. They kept a lunch wagon on the

side all the time. Lucas was determined to make the scene a classic among fantasy and science-fiction extravaganzas.

In the story, Luke and Ben and the two robots go to a rough dive in the port town of Mos Eisley to recruit a pilot who is mercenary enough to take them into dangerous space without asking questions. In the cantina, they meet lovable, if unscrupulous, Han Solo—a smuggler and pirate with a patched-together hot-rod of a spacecraft.

From the novel: "Luke found himself squinting as they entered the cantina. . . . Luke was astonished at the

variety of beings making use of the bar. There were one-eyed creatures and thousand-eyed, creatures with scales, creatures with fur, and some with skin that seemed to ripple and change consistency according to their feelings of the moment. Hovering near the bar itself was a towering insectoid that Luke glimpsed only as a threatening shadow. . . ."

The *Star Wars* makeup man was Stuart Freeborn—presumably most famous for his Ape suits in *2001*. Freeborn had completed his costume for Chewbacca—Han Solo's seven-foot furry sidekick—and was working on assorted aliens that were to populate the cantina, when he was taken seriously ill and was rushed to the hospital.

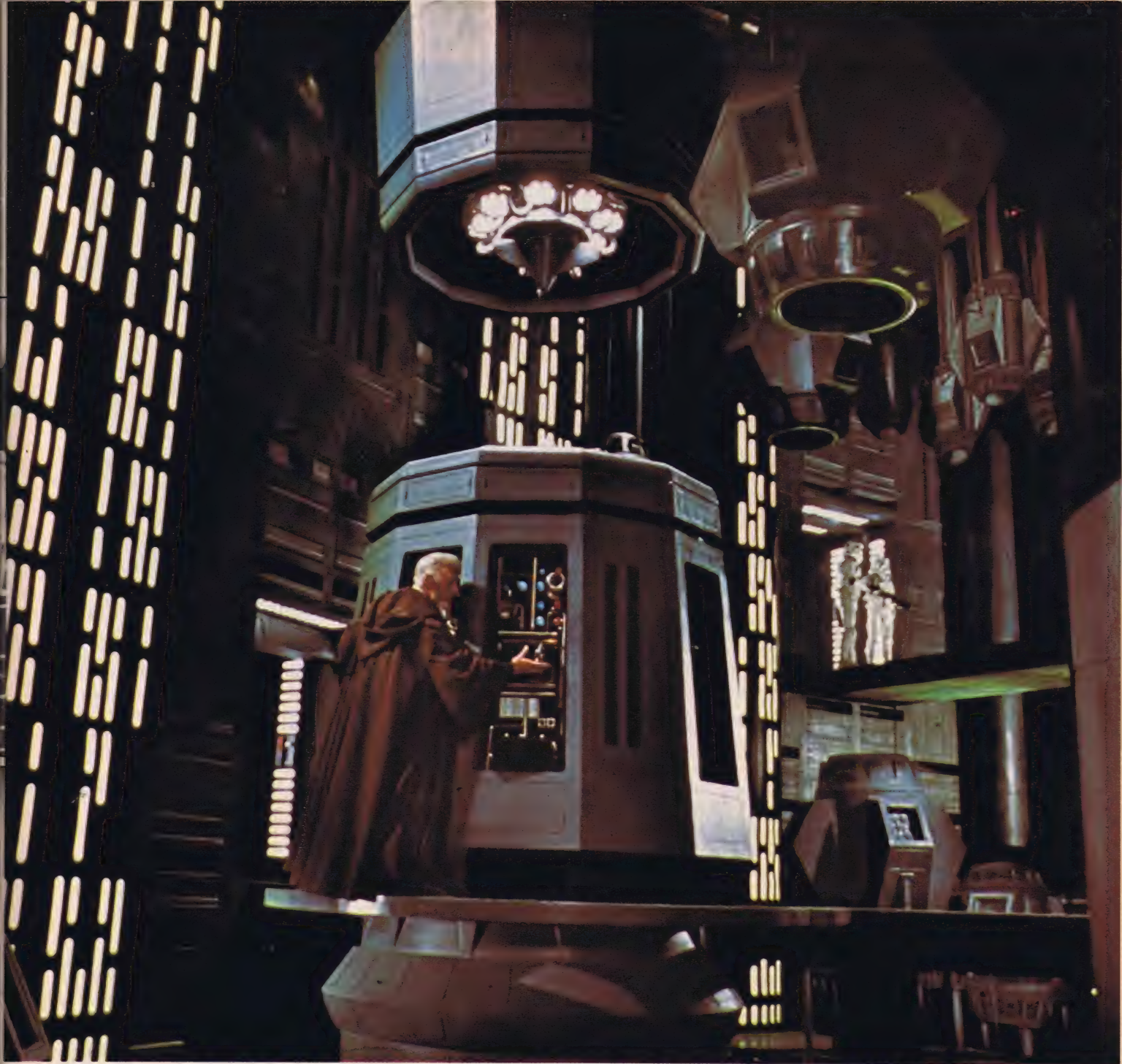
Already behind, the company had no choice but to make do with the best aliens they could come up with—without Freeborn.

"He got out of the hospital," Lippincott explains, "just about the time we had finished making the cantina sequence, maybe a little after. He was never able to offer us his expertise; and we really needed him."

The inadequacies of the scene haunted Lucas. After the company had

Below: How *do* you build a vehicle that works on "repulsor" technology when there isn't any such thing? This is the kind of problem that could cause a rewrite.





Above: Infiltrating the *Death Star* is one thing; leaving it is quite another. Kenobi must turn off the tractor beam that keeps them captive. He is aided by *the force*.

completed its 17 weeks in London, Lucas called in artist McQuarrie and an underground newspaper editor known for his wild imagination, Ron Cobb, for assistance. "Eventually, George had practically everything redone here, with all new creatures edited into the film. The sequence turned out somewhat different from the painting, and the way it was originally conceived."

While both Lippincott and I were admiring the set of McQuarrie paintings—which are now arrayed splendidly

on the wall behind his desk*—he mentioned, to wrap up our interview, various other problems and solutions encountered in making the look of the film conform to those pre-production masterpieces:

*A few days after this interview took place, the *Star Wars* office was broken into. Many of those exquisite Ralph McQuarrie paintings were taken along with the slides, photographs and other promotional materials. Anyone offered such material for sale, at a convention or through a private contact, should be aware of the fact that this is stolen merchandise. Not only does partaking in such transactions encourage future thefts, it is illegal. If you are approached with *Star Wars* material you can contact us here at STARLOG with the pertinent information. We, in turn, will forward the information to the *Star Wars* legal department. Thank you for cooperating in this effort to discourage unscrupulous dealers and collectors from ripping-off the rest of us. H.Z.

NEEDED: MORE SPACE

"We used one other stage in England besides those at Elstree—the huge stage at Shepperton, which at one time was the largest in the world. We needed it for the two hangar sequences—on the *Death Star* and at Mos Eisley—and for the throne room sequence that plays under the end titles."

Big as the stage was, it was never quite big enough. "Everything around the ship became a stationary object and the hangar sets were completely built around the ships, to cut down on expenses. I mean, they used the actual walls of the stage and just redid them—because the hangars had to take up that



Above: The "sandcrawler" is truly awe-inspiring in its conception. Not only couldn't the whole thing be built, but the *miniature* stands four stories tall.

much space."

The throne room (the painting looks like something from *Land of the Pharaohs*) also proved a problem; the huge stage was just not big enough. "They had to work out forced perspectives to simulate the vastness." Still it did not turn out quite as vast as the painting shows it.

ROCKETS, ROCKETS EVERYWHERE

The rockets and their dogfights and battle sequences gave the SFX men fits. "They actually built a full-scale X-wing and a full-scale Y-wing and about half the pirate ship as well. These are quite small in comparison to some of the larger vessels like the star destroyer and the *Death Star* itself—which we've been saying is 200 miles in diameter. I don't know what it really is when you compare it to other objects in the pictures with it." The leviathan ships were miniatures, of course.

"While the filming was still going on in England, here they were still into research for the special effects that would have to be inserted into the film. They had to work out this whole thing involving movement at unbelievable speeds. They did not want to go for the lyrical movement Kubrick went for in 2001. They spent a lot of time studying, frame by frame, footage of actual aerial dogfights. Then they did storyboard on that part and readapted it for our own dogfights. I think they did four com-

plete storyboards before they were satisfied with the dogfight climax.

"They developed a new way of doing optical effects, a way of *layering* the different elements of the pictures so as not to encounter grain by going to too many generations of negatives. Kubrick (2001) faced a different problem: he had to put all the elements of the shot in the same picture and just shoot and shoot until they got it right. It was very expensive. A good deal of our budget went into research and development. Some of the space work was done with stop-motion

animation; some involved computer-generated images."

Charlie Lippincott's unabashed enthusiasm for the film is always evident as he speaks of the project, of his friend George Lucas' brainchild. Clearly he could entertain for days with behind-the-scenes glimpses into the creation of a movie that is a success already in his eyes—even before the final touches have been added.

"The film is almost finished, from what I saw last week. There are still a few opticals to incorporate. . . ." ★

Star Wars was filmed at a cost of approximately \$10 million at EMI Elstree and Shepperton facilities in London, England, with location units filming in Tunisia (Tatooine) and Central America (Yavin), with post production work conducted in Los Angeles, California.

Conceived, written, directed by **George Lucas**

Produced by **Gary Kurtz**

Released by **20th Century-Fox, Alan Ladd, Jr., president**

Premiere date: **May 27, 1977** in 50 U.S. and Canadian cities*

Starring:

Mark Hamill as Luke Skywalker
Harrison Ford as Han Solo
Carrie Fisher as Princess Leia Organa
Sir Alec Guinness

. as Ben (Obi-Wan) Kenobi

Peter Cushing as Grand Moff Tarkin

Dave Prowse as Darth Vader

Peter Mayhew as Chewbacca

Also featuring **Anthony Daniels** and **Kenny Baker**

*New York, Los Angeles and San Francisco engagements will feature 70mm prints with 6-track magnetic Dolby Stereophonic Sound. All other cities will screen 35mm prints with Dolby 2-track optical Stereophonic Sound tracks.

Production credits:

Production designer—**John Barry**

Pre-production art—**Ralph McQuarrie**

Director of photography—**Gil Taylor**

Music by—**John Williams**

Miniatures and optical effects—**John Dykstra**

Dykstra

Production and mechanical effects

(robots)—**John Stears**

Makeup and alien designs—**Stuart Freeborn**

Freeborn

Additional alien designs—**Ralph McQuarrie and Ron Cobb**

Film editing—**Marcia Lucas, Richard Chew and Paul Hirsch**

Chew and Paul Hirsch

Special sound effects—**Ben Burton**

Ben Burton

Related credits:

Paperback books now or soon to be available from Ballantine Books:

Star Wars—From the Adventures of Luke Skywalker—a novel by George Lucas.

The Making of Star Wars—a log of the production, by Charles Lippincott.

Star Wars (a second novel, not yet titled), by Alan Dean Foster.

Star Wars—a six-part Marvel Comics serialization of the film story by Howard Chaykin and Roy Thomas.

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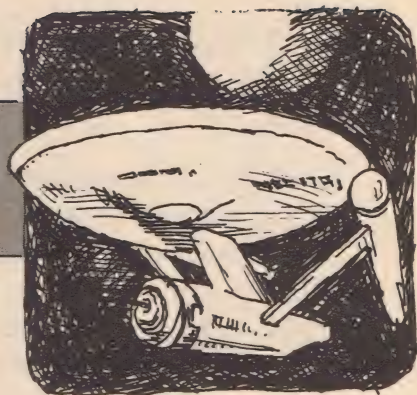
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STAR TREK REPORT

A Fan News Column by Susan Sackett



"I wondered why Jerry was going on and on about *EST!*" exclaimed Allan Scott as he uncorked a bottle of champagne.

It was a warm Friday afternoon in Hollywood as we lifted our glasses in a toast to *Star Trek* motion picture screenwriters Allan Scott and Chris Bryant. For a week we had carefully planned the surprise party, and our executive producer Jerry Isenberg even helped to decoy the writers, calling a bogus meeting across the lot and then, stumped for something to discuss, extolling the virtues of *EST* (Erhard Seminar Training) to the bewildered Chris and Allan. They returned to our office to greetings of "Surprise" offered by friends and co-workers.

The occasion was one of celebration, yet touched with the sadness of saying "au revoir" to old friends. The writers had completed the first draft of the motion picture script and were heading off for various other projects. They had invested over six months of their time in

this first draft, which will undergo at least another draft before it becomes a final shooting script. At the moment a re-writer has not yet been selected, but the following note attached to an Anacin bottle was left in the office:

To the writer: Take no more than 48 a day. The dosage may be increased if the director's in town.

A memo on their bulletin board gave another warning:

TO: He who follows
FROM: Us
DATE: 3/18/77
SUBJECT: Restaurants
The following are convenient: Nickodells', Lucy's, Oblath's. There are also two convenient cemeteries—one just behind the lot, the other in the filing cabinet.

In a final, touching memo they expressed their farewell with their typical touch of British wryness:

TO: All on STAR TREK
FROM: Allan Scott/Chris Bryant
DATE: March 18, 1977
SUBJECT: Au Revoir
Giving birth takes nine months. We've only been gestating for seven. So there's no baby. But there's an embryo. Look after it.

That's exactly what we're doing. Although awaiting the script's second draft, the project has begun moving along at an impressive pace. Our offices in Building E on the Paramount lot have been expanded so that we now occupy both sides of the corridor; we've added staff, including a production manager (Terry Carr, who was production manager on *King Kong*); production and special-effects designers; art director, and an artist-illustrator. Plans are now being considered to shoot a portion of the movie in England, although this was not definite at press time. Gene Roddenberry was quite impressed with the facilities that country has to offer, having just spent the last three months there working on *Spectre*.

Speaking of *Spectre*, NBC executives have hinted that it may become a series. Fan support can help make it a reality, in the same way they helped save *Star Trek* for its second and third seasons. The network *does* read your letters—so if you'd like to help make *Spectre* a series, write a letter to:

Mr. Bob Howard
President
NBC Television Network
30 Rockefeller Plaza
New York, NY 10020
and/or
Mr. John J. McMahon
Vice-President, Programs
NBC Television Network
3000 W. Alameda Ave.
Burbank, CA 91523

Now, one would think that these two projects would be enough to occupy any producer's total time, but not Gene Roddenberry. His last week over in England was spent working closely with Paul McCartney on the film he is writ-



ing for Paul and the *Wings* group. It began last summer when *Wings* did an appearance at the Forum in Los Angeles. Paul had always been a *Trekfan*, and one afternoon he telephoned our office to set up an appointment with Gene. After my voice returned and I picked myself up off the floor, we arranged the meeting. The result—Gene is writing a full-length science-fiction motion picture which will star Paul and the group, and Paul will write all the music for the film. It will probably be produced late this year, or early 1978.

Another possible Roddenberry project is a pilot for CBS television called *Battleground: Earth*. Set in Earth's immediate future, the series deals with subversive infiltration of this planet by a superior alien race. The pilot script is by Brian McKay (*McCabe & Mrs. Miller*), based on a story by Gene Roddenberry. We are presently awaiting word from Twentieth Century-Fox on a beginning production date.

Incidentally, STARLOG reader James Tarangelo of Staten Island, NY, sent a letter inquiring about *Magna I* (mentioned in STARLOG #1), a screenplay Gene wrote for Twentieth Century-Fox in 1975. At present, the project has been shelved, as there have been major changes in studio management since that time. However, anyone interested in reading Gene's original script can purchase a copy for \$10.00 from Lincoln Enterprises, P.O. Box 69470, Los Angeles, CA 90069.

And, as if all these projects weren't enough, Gene is now completing his novelization of the original *Star Trek* movie script (the one Paramount rejected) tentatively titled "The God Thing." It's due to be published by Bantam Books late this year.

Whew! I think I'm going to need an assistant myself! ★

FUTURE CONVENTIONS

Here is the latest information on the upcoming conventions. *Star Trek* cons are denoted with (ST), *science-fiction* cons with (SF). Other cons are labeled appropriately. As always, guests and features for most conventions are subject to last minute changes—for final details check with the person or organization listed. To speed communications, include a self-addressed, stamped envelope.

SPACE-CON 4 (ST&SF)
Los Angeles, California June 18-19, 1977
Space-Con 4
3050 W. 7th Street #102
Los Angeles CA 90005

SF, HORROR & FANTASY WORLD EXPOSITION '77 (SF)
Tucson, Arizona June 2-5, 1977
The 1977 SF, H & F World Expo
P.O. Box 4412
Tucson, AZ 85717

WESTERCON 30 (SF)
Vancouver, British Columbia July 1-4, 1977

Vancouver, British Columbia
Westercon 30
Box 48701, Stn. Bentall
Vancouver, B.C. Canada

STAR TREK PHILADELPHIA (ST)
Philadelphia, Pennsylvania July 15-18, 1977

Star Trek Philadelphia
c/o Tri-Star Industries
88 New Dorp Plaza
Staten Island, NY 10306

RIVERCON III (SF)
Louisville, Kentucky July 29-31, 1977
Rivercon
Box 8251
Louisville, KY 40208



OKon (ST&SF)
Tulsa, Oklahoma July 30, 1977
OKon
Box 4229
Tulsa, OK 74104

INFINITE STAR '77 (ST&SF)
Milwaukee, Wisconsin July 22-23, 1977
Star Trek Milwaukee
c/o Infinite Star Productions
52421 Morningside Dr.
Waukesha WI 53186

SPECTRUM CON '77
Houston, Texas August 19-21, 1977
Spectrum Con '77
J. Fischner
13906 Oakland Lane
Sugarland TX 77478

PHOENIX FAN CONVENTION (ST&SF)
Phoenix, Arizona August 26-28, 1977
Phoenix Fan Convention
P.O. Box 33785
Phoenix, AZ 85067

SUN CON (SF)
Miami Beach, Florida Sept. 2-5, 1977
Sun Con
Box 3427
Cherry Hill, NJ 08034

STAR TREK AMERICA (ST)
New York City Sept. 2-5, 1977
Star Trek America
88 New Dorp Plaza
Staten Island, NY 10306

SALT CON, INC. (SF)
Salt Lake City, Utah October 14-15, 1977
Salt Con, Inc.
P.O. Box 15721
Salt Lake City UT 84115

CHATTACON 3 (SF)
Chattanooga, Tennessee January 6-8, 1978

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"MY INSURANCE COMPANY? METROPOLITAN LIFE . . . WHY?"

STARLOG INTERVIEW

Screenwriter Allan Scott Talks About STAR TREK — THE MOVIE

By BILL IRVINE

For the first time in the three-decade history of television, a TV series is being made into a major motion picture. This, unquestionably, is a bold step for any studio to undertake, and, in this case, a ten million dollar gamble. The *Star Trek* fan knows that the film is going to be from the *Star Trek* TV series.

Many of those fans are wondering if it will ever happen and if it does, how will the story be different enough from the series to warrant going out to a theatre and paying to see it. There are other questions too. Questions like: Will it be the same crew and cast, or will it be altered in some way? Will there be some unusual special effects? Will the film also offer some sort of social commentary? What will the storyline be?

The list of questions goes on, and for answers to many of them we will just have to wait until we see the movie. But the answers to several interesting questions were supplied in a discussion with Allan Scott, one of the two writers of the film. (The other writer is Chris Bryant.)

Without negating the importance of the producers and directors of a film, the essence of what happens is determined by the writers. It is obvious that they create the storyline and dialogue. The writer also sets the requirements for all the settings (such as what other planets look like and what the living beings from other worlds look like), the special effects, costumes, and so forth.

While Allan would not go into the plot in detail, a great deal may be deduced from Chris and Allan's background and their reaction to the extensive research they did before beginning

the writing of *this* film. Prior to their writing of *Star Trek*, this Scott/Bryant team had never written science fiction, nor had they any great interest in it. They were, therefore, reluctant to undertake this project.

Scott and Bryant were sought by Jerry Isenberg (the film's Executive Producer) as a result of his seeing another film they wrote called *Don't Look Now*. It is reasonable to conclude



Artwork: Howard Cruse

that there is *something* about *that* film that Isenberg would like to see brought into *Star Trek*. Allan noted that Gene Roddenberry also liked *Don't Look Now*.

They arrived on the scene at Paramount studios last September and began their project by doing a great deal of research. "Chris and I," Allan said,

"have seen just about every science-fiction film ever made. Secondly, we've seen every episode of *Star Trek*; and our reading list was pretty impressive, even to a fourth-year science-fiction scholar. Indeed! It is one of the things that has taken us so long to get started."

Through all of that research, were there any individual books or films that particular impressed them?

"I think the book that stands out most," Alan responded, "is one by Olaf Stapleton called *Star Maker*. [He's an English SF writer who wrote in the thirties and forties.] It's just a remarkable piece of imagination. We also read many of the Edgar Rice Burroughs' books because we thought that was closer to the feeling that we wanted to achieve—in a certain part of the story." [Burroughs wrote his John Carter/Mars books even before he created Tarzan. He is acknowledged as one of the founding fathers of the fantastic-adventure genre.]

Allan continued: "In movies . . . well obviously 2001. We were quite surprisingly taken by an English film called *Children of the Damned*. It worked extremely successfully! And then, we liked the Michael Rennie film, *The Day The Earth Stood Still*. Then we saw a lot of films just for their special effects."

It is interesting to put all of those pieces together and see what they might add up to. . . .

Moving on from background to the problems involved in the writing of this movie, Allan said, "I think it is the first time that they have ever attempted to make a big motion picture out of a television series." Then he went on to explain: "Clearly, the first thing you have to do is to convince people it's worth leaving their homes and paying

three dollars to see something that they may think they could see at home.

"The difficulty has been in *defining* the difference between what is television and what is movie—and to make that clear to an audience. People talk about something being 'TV weight.' I'm not really sure what that means. . . ."

He cited an example: "If you went to a studio with a story about a boy and girl who fall in love; and he has a rich father and she has leukemia and dies, so he's left on his own—the people would say that that's 'TV weight.' Of course that was *Love Story*.

"With *Star Trek* we just recently realized what should have been obvious; that is, we have an advantage in scale, time and special effects. The second advantage is time to prepare and execute *everything*—instead of the two or three weeks you have to do a 60 minute television episode, we have several months to do a 90 or 105 minute movie. That means that we can be more careful; the optical effects and special effects can be really interesting and hopefully astounding!

"Really, our approach to writing the movie has been simply to take advantage of the scope and scale and time that is offered by film. I mean, it will be *Star Trek*. But, at the same time, we have to be aware of the fact that if every *Star Trek* fan went to the movie three times, it still wouldn't pay for the picture. So, we also have to try and make a movie for other people—people who aren't *Star Trek* fans, people who aren't even science-fiction fans."

Will the crew be the same?

Allan answered: "At the moment, we

have written parts for all of the original crew. And, there will be two or three new characters who will augment and supplement what presently exists." Then he added that, "the studios are being marvelous about it. I mean, they're not asking us to write a part for Robert Redford, or anybody; they're simply saying: 'Write in the extra parts.' And they have been talking about distinguished actors who will add to the movie, rather than name actors who will add to the box office."

In speaking about their approach in terms of the advantages of time and scale available to film makers, Allan neglected the significant dollar advantage that they also have. But, later in the conversation he did add another interesting comment about their approach.

When they were setting out to begin the writing they had a discussion with Jerry Isenberg, Gene Roddenberry and Phil Kaufman at which time Chris and Allan informed them that "we want to create a really terrific mindfuck! I think that is something that you can do in movies that you often times cannot do in television. If you can really blow people's minds with this movie, then it will be successful."

In addition to blowing people's minds, Allan also said that they wanted to, "in a sense, touch on the emotions in that sort of visceral feeling that sends people to see movies like *Rocky*. We obviously can't get people to see the movie for the same reason they're seeing *Rocky*, because the boxing ring is different. But I think, if you can just let them sit and have their minds blown for

an hour. . . . I would enjoy that!"

So, the creation of a film that is something really different than television has been one major problem. Have there been any others?

Yes. Allan noted that there was another. "I think," he said, "the biggest problem really, is probably rather boring to talk about. It really involves the technical side: opticals, models and model shots, mock projection—and stuff like that. Those are the real problems." Then he explained that he was not *allowed* to say any more about the technical aspects, just as he was prohibited from saying any more about the storyline.

However, after giving it some further thought, he realized that there was something he *could* mention. "There is a story point that involves a refitted and refurbished *Enterprise*. It's going to be a lot more detailed (and hopefully, with what Gene and a lot of other people have learned in the intervening eight years, it will be scientifically more interesting and advanced). You'll see a great deal of it! There are five or six major sets of the interior of the *Enterprise*, including the hangar decks where the shuttles go from—which is *enormous*.

"We'll also see, on the *Enterprise*, the bio-lab—which is where they keep specimens of animal and plant life from all their series of journeys; recreation rooms, and other special effects. I mean . . . we're dealing with a number of space phenomena which apparently take months and months to produce and have to be planned well in advance."

He continued on, "We'll be visiting

(Continued on page 52)

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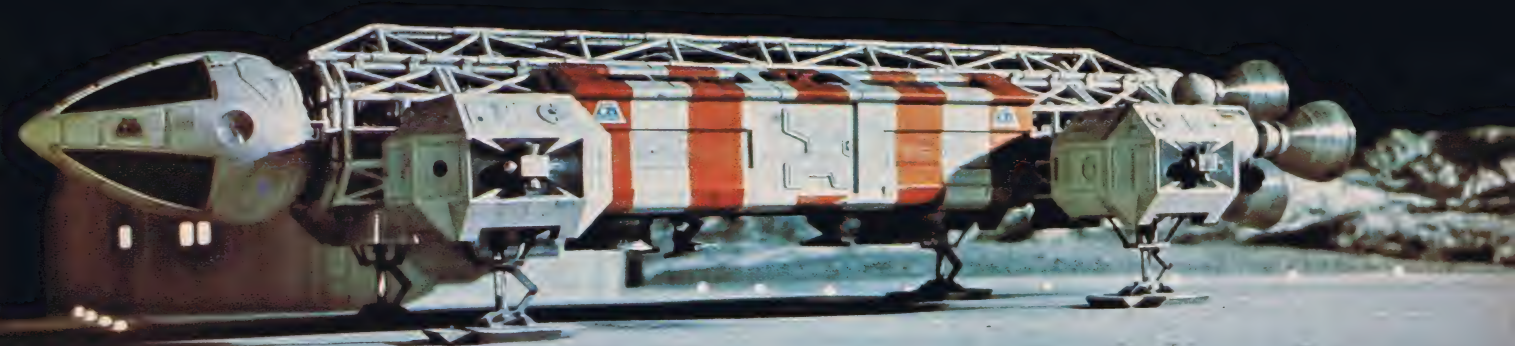
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SPACE: 1999



Identifiable by the five bold red stripes on the utility pod, the Rescue Eagle, equipped with a mobile hospital unit, waits on Pad 2, ready in the event of an emergency.

Special Effects Director Nick Allder and the "father" of the Eagle Transporter, Brian Johnson, display the 44, 22, and 5 1/2" models of the spacecraft before the "Moon."

"Attention, all sections Alpha. This is Commander John Koenig. As you know, our Moon has been blasted out of Earth orbit. We have been completely cut off from planet Earth.

"As we are, we have power, environment and, therefore, the possibility of survival."

—Commander John Koenig, September 13, 1999

As Moonbase Alpha traveled through the galaxy, a helpless captive of Earth's runaway satellite, it survived through the application and manipulation of its existing technology. One of Alpha's most indispensable (and surprisingly versatile) pieces of hardware was its sole source of transportation: the Eagles. Modified to meet a variety of needs, these vehicles quickly became synonymous with Moonbase Alpha and a universal symbol for *Space: 1999* itself.

THE EAGLES

THEIR HISTORY, USES, AND CONSTRUCTION

By GEOFFREY MANDEL

An element not mentioned by Commander Koenig, yet equally important to the survival of Moonbase Alpha, is that of transportation—a means of getting from one place to another, of investigating unknown and potentially dangerous phenomena, of gathering minerals crucial to Alpha's recycling plants. This need for quick, efficient transportation is admirably filled by the Eagle, Moonbase Alpha's workhorse spacecraft, which has rapidly become a trademark for *Space: 1999*. Necessary not only to the inhabitants of Alpha, the Eagle is also a vital element of the 1999 storyline, serving as a dynamic method (as opposed to a passive method like *Star Trek's* transporter) of getting the characters into a

new, exciting environment each week.

The Eagle is the innovation of special-effects master Brian Johnson, who designs and executes all the models and special-effects sequences used on the series. Johnson's other credits include *Thunderbirds* and *UFO* (also Gerry Anderson productions), and MGM's *2001: A Space Odyssey*, although his name did not appear on the screen credits. According to an interview in the British publication *T.V. Sci-Fi Monthly*, the inspiration for the squat, insect-like Eagle did in fact come from an insect—a grasshopper:

"I find that if you make spacecraft, and so on, rather insect-like then you are half way there. That seems to be the way our technology is going. Take *Concorde* as an example.

"The Eagle was based on a kind of grasshopper shape which just sort of grew. It was considerably shorter before we started filming, but later it elongated." Probably an even more important influence was the current trend in spacecraft design: the inset windows

in the front of the Eagle's command module, for instance, strongly resemble those of the Gemini capsule; the engines and landing pads also embody elements of present-day Apollo spacecraft. The producers of *Space: 1999* have always claimed that the show is an extension of our 1977 world, that men like John Koenig grew up in the era of John Glenn and Neil Armstrong. This is reflected not only by the characters, but by the technology available to them. The "cunning" devices that enable the Eagle models to retain realism even at very close camera range include "dirtying" random sections of the exterior to give an illusion of depth, and adding small pieces scavenged from plastic model kits to simulate exterior detail and plating. Four Eagle models are actually used, ranging from 5½" to 44" in length—they were constructed from plaster, perspex (a plexiglas-like plastic) and molded copper piping. More than four Eagles are rarely needed in a single shot. When the impression of an entire fleet of Eagles is desired, it is accomplished

Note: Sources for all technical data on the Eagle spacecraft are: *The Making of Space: 1999* by Tim Heald, promotional materials provided by ITC, photos and tapes of broadcast episodes, and the combined resources of draftsman/writer Mandel and convention organizer David Hirsch—an authority on Gerry Anderson productions.



In the command module, the "nerve center" of the Eagle Transporter, co-pilot Bill Fraser (John Hug) and pilot Lt. Alan Carter (Nick Tate) prepare to launch the ship.



What happened to the walls? Here we have the forward section of the utility pod which is used for storage. The left wall of the set has been removed to show where the space suits should be and some of the many compartments that are used to store various types of gear.

either by quick, successive camera angles of Eagles taking off and flying by, or by an optical superimposition of several shots showing Eagles of diminishing size. The largest Eagle, costing some \$3,000 to build, is equipped with hydraulic landing pads and freon gas propulsion to "raise dust" upon take-off.

THE EAGLE: AN OFFICIAL DOSSIER

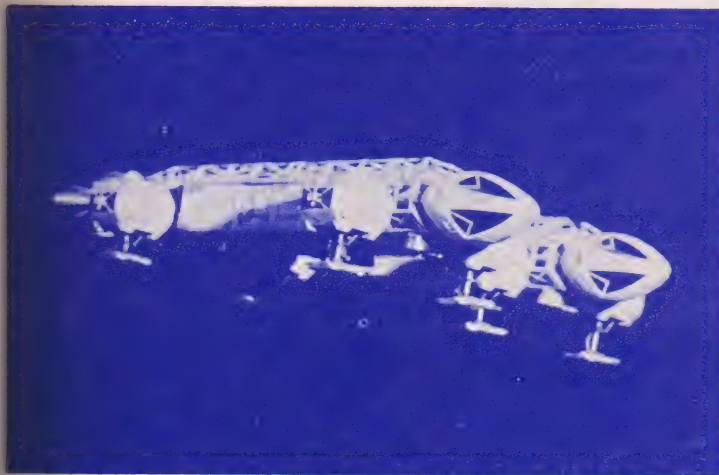
The Eagle is one of several classes of interplanetary spacecraft (others include the Hawk warships, swift support vessels, and deep-space probes), originally authorized by the International Lunar Finance Commission and constructed by the Engineering and Technics section of Moonbase Alpha using materials and components either shipped from Earth or manufactured on the Moon. Completely modular, the crafts are divided

into three basic sections: the command module, the service pod, and the superstructure—containing the landing gear, main fuel tanks and boosters. Eagles, standard reconnaissance craft for all extralunar activity, are powered by four nuclear fusion rockets and carry fuel reserves for 48 hours of flight. Artificial gravity force fields built into the Eagle enable it to accelerate up to 15% of the speed of light, giving it a maximum range (with extra fuel reserves) of several light-days. The Eagle also has the capability to enter the atmosphere of a normal-gravity planet, land (using its chemically-fueled landing rockets), and return to Alpha. Although the Eagle was not designed for use as a military vessel, it has as standard equipment a laser gun and an arsenal of space-to-space missiles.

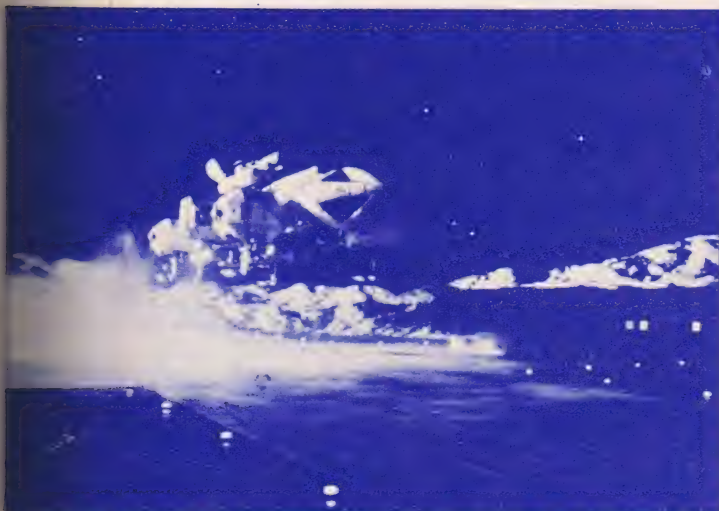
Eagles are piloted by an astronaut with official designation of Eagle Pilot and a rank of no less than Captain. The

pilot receives his orders directly from Mission Control, and employs both the onboard and Alpha computer systems for guidance, astronavigation, and interpretation of sensor data. The right seat in the Eagle cockpit is usually occupied by a copilot, although the Eagle can normally be handled by a single operator. In an emergency, when both pilots are incapacitated, an Eagle may be operated from a slave-station in Command Center.

NOTE: Your complete Eagle blueprints are on the *inside* of this special fold-out insert. To remove this page, *carefully* open center staples and lift out *gently*. Then close the staples again and your magazine is back in mint condition.



In an emergency situation, the Eagle Transporters, equipped with the house-like utility pods, can dock in mid-space.



An additional booster unit attached to the superstructure of the spacecraft can give the Eagle Transporter greater speed and distance. (Note the freon gas jets used to raise dust on the outboard boosters of the model.)

Photos © ITC



In the Bray Studios sound stage that was used to shoot the spectacular visual effects for *Space: 1999*, Brian Johnson (left) tends to the repair of his Eagles. Notice the two scaled-down Moon buggies behind the largest Eagle model.

TYPES OF EAGLES USED BY MOONBASE ALPHA:

Transporter Eagles

Transporter Eagles, fitted with the standard passenger pod, can normally accommodate eight passengers in addition to the pilot and co-pilot. Under emergency conditions (such as total evacuation of Moonbase), they can carry up to twelve passengers and additional water and provisions for extended habitation. Transporters are used for missions on the lunar surface, in lunar orbit, and in interstellar space in the general vicinity of Moonbase; or on routine planetary landings when no hostile elements are anticipated and the contact team deems special laboratory or environmental equipment unnecessary.

Renaissance Eagles

Although the recon pods look similar

to the transporter pods on the outside, they are equipped with various types of sensory devices for exploratory missions. The recon pods also contain a computer that can either be tied into Alpha's master computer or work self-sufficiently.

Rescue Eagles

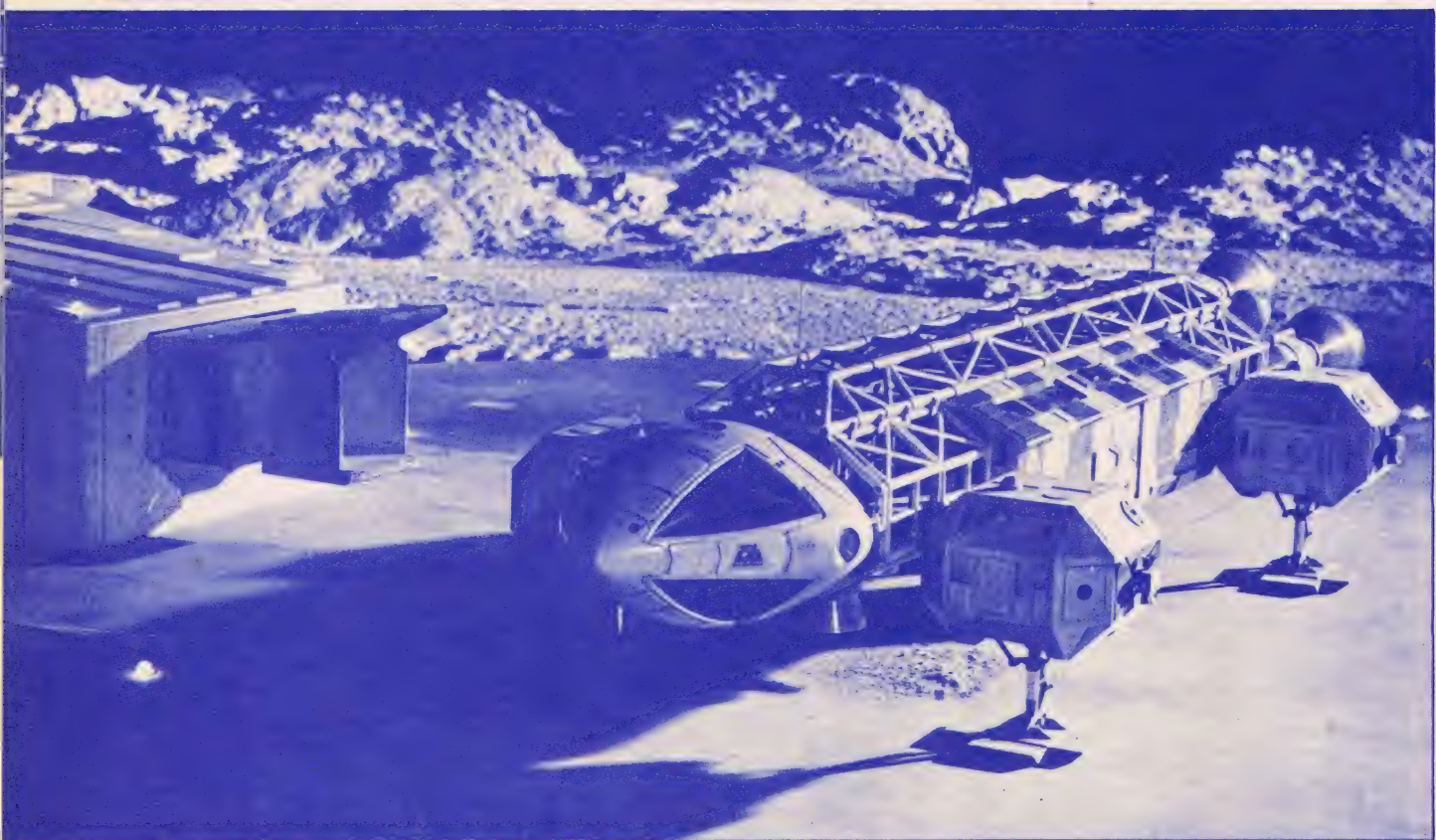
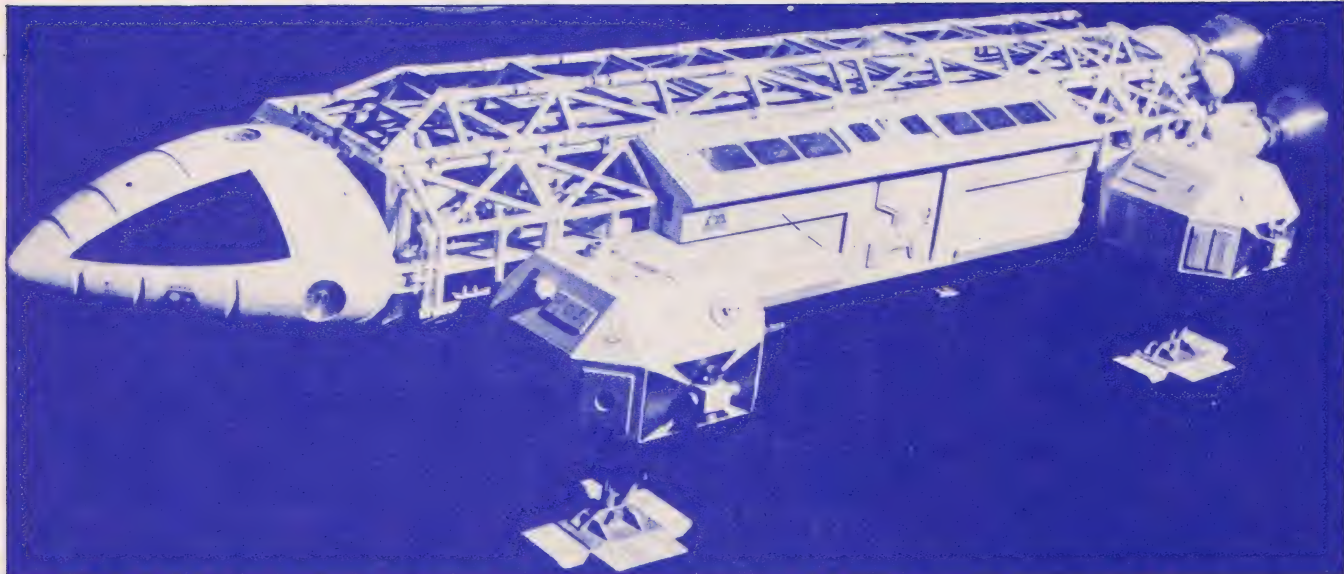
Rescue Eagles are Transporters that have been fitted with a special passenger pod, identified by bold red stripes on the exterior. These are adapted for field diagnosis and treatment of injury or disease that may be encountered on a planet's surface or in deep space. Manned by medical personnel, Rescue Eagles are equipped with mobile beds, patient-monitor units, and facilities for field surgery.

Freighter Eagles

The cargo pod, identical to the passenger pod in configuration, is used for transporting supplies and equipment to exploration teams on a planet's sur-

face, and for the return of native elements essential to Alpha's environmental and reprocessing systems. Freighters can also be used for refueling Eagles as space-borne tankers, transporting additional fuel to Eagles with insufficient reserves to return to Alpha.

The Eagle can also accommodate one of several specialty modules such as the winch platform used in "Breakaway," to disperse the nuclear waste cannisters. For Year Two, the Eagle had some interesting additions: a strap-on booster back, used in "The Metamorph," which increases the range and power of the Eagle; and the laboratory pod (first shown in "All That Glisters"), a modified version of the passenger pod equipped to serve as a remote laboratory. Uses of this pod include the location and refinement of crude minerals on a planet's surface, eliminating the need to transport bulky raw ores back to



Top of page: Brian Johnson's famous model hangs in space. Above: At rest this model shot reveals the fine wires used for support.

Alpha. This pod also acts as a base for a planetary-contact-and-survey team: it can carry food and water and recycle air to support the team for several weeks, providing ample time for exploration before the Moon's trajectory moves it out of range.

Eagles are serviced in the mammoth hangar complexes directly beneath the four main launch pads. A crew of Eagle

engineers is responsible for repairing or replacing damaged components, and maintaining the Eagles in flight-ready condition. Alpha supports a fleet of twelve Transporter Eagles, twenty-six Recon Freighters, and two Rescue Eagles on 24-hour alert status.

In the event of *Operation Exodus*—immediate and complete evacuation of Moonbase Alpha on the personal

order of Moonbase Commander—all available Eagles are employed to transport colonists and supplies from Alpha to a habitable planetary environment. Until such time, the Eagle remains the workhorse of Moonbase Alpha—as indispensable to the 311 men and women of Alpha as the conestoga wagon was to the settlers of America's Western frontier. ★

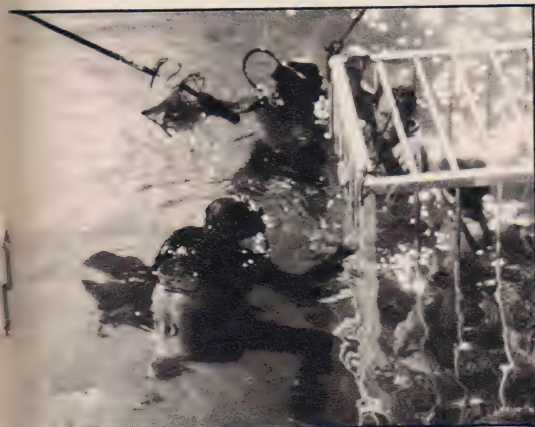


ATLANTEAN RETURNS TO AIRWAVES

On May 7th, NBC-TV aired their second *Man From Atlantis* film, "The Death Scouts." It dealt with Mark Harris, the "man from Atlantis," and Dr. Elizabeth Merrill, of the Foundation for Oceanic Research, being summoned by the Coast Guard to investigate the mysterious disappearance of three scuba divers. Their extensive investigation uncovers material which indicates that water-breathing aliens from another planet are scouting the Earth for possible takeover. Harris, believed to be the

last surviving citizen of an underwater habitat known as Atlantis, is anxious to learn about his origin and makes every effort to establish contact and serve as a liaison between the water-breathers and surface-dwellers. Patrick Duffy and Belinda Montgomery returned as the series' stars. "The Death Scouts" was directed by Marc Daniels, who also di-

rected fourteen *Star Trek* episodes. *The Man From Atlantis*' phenomenal special photographic effects were provided by Tom Fisher and Gene Warren. Producing *Atlantis* is television veteran Robert H. Justman. Justman has previously worked on the staffs of both the *Superman* and *Star Trek* TV series. *Man From Atlantis* fans will be happy to know that NBC has ordered at least two more two-hour films based on Mark Harris' aquatic adventures. ★



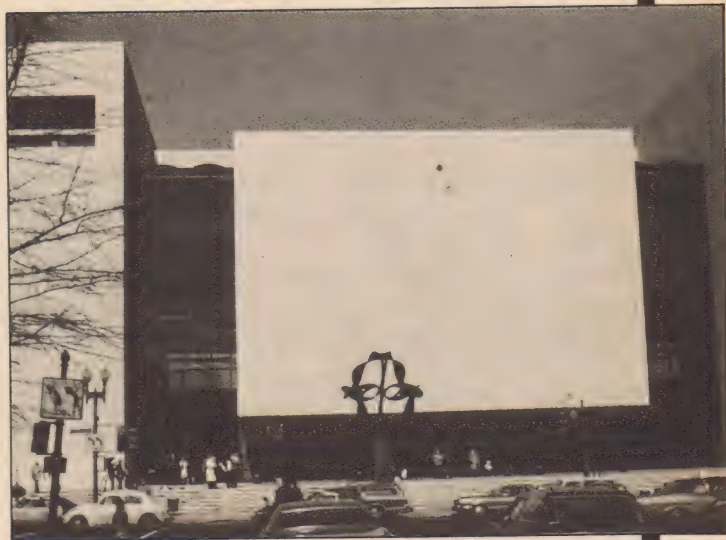
Top of page: Belinda Montgomery and Patrick Duffy are the series' stars. Above: Behind the scenes with the Atlantean, technicians film the fish-man being "drowned" by Victor Buono before he learns the true nature of his captive. Right: A scene from "Death Scouts", co-starring Tiffany Bolling, preceded "The Killer Spores" aired on May 17th.





INTO THE WILD BLUE YONDER

There Is An Awesome Place,
Open To The Public,
At Which
Where We're Going
Meets
Where We've Been . . .



THE NATIONAL AIR AND SPACE MUSEUM

By DAVID HOUSTON

Here the Wright Brothers' plane flies over the Apollo re-entry module; intercontinental missiles rise through satellites and rockets to a glass roof 90 feet up. Within sight of Lindbergh's *Spirit of St. Louis*, the Starship *Enterprise* marks a gateway to speculative exhibits of other worlds—and the DC-3 hanging from the steel rafters *is the real thing!*

Here, according to Apollo-11 astronaut Michael Collins, we "should not only examine the past but explore future possibilities as well." Collins should know: he runs the place. It's the new and overwhelmingly spectacular National Air and Space Museum of the

Smithsonian Institution in Washington, D.C.

The \$40,000,000 marble, glass, and steel structure houses and represents realized dreams—from man's primitive daydream of flying with the birds to his convictions leading to lighter-than-air vehicles, then heavier-than-air craft, to his trips to the Moon and his intention to rendezvous with the planets and the stars. In a more down-to-Earth vein, the museum is a *dream-come-true* for the Smithsonian: a vision that began to take shape a century ago.

In 1876, when the Centennial Exhibition in Philadelphia closed, it bequeathed a "flying" exhibit to the Smithsonian—a collection of Chinese kites.

In 1877, Dr. Samuel P. Langley, Secretary of the Smithsonian, delved headlong into the problem of heavier-than-air flying machinery—determined that the Smithsonian should be the first institution to send an "aerodrome" aloft. He recommended that the Institution form a department of aeronautics.

Langley built scale models (powered with rubber bands) to explore wing con-

figurations and designs. Finally, he built a model powered by a tiny steam engine (now on display at the Air and Space Museum); it was built to scale, half the size of a manned craft. But his full-scale working models failed to put a man into the air. On October 7, 1903, he launched his "aerodrome" from a houseboat; it sank to the bottom of the river (the pilot escaped). A little over two months after the fateful plunge, the Wright Brothers conquered the air at Kitty Hawk. But the Smithsonian's involvement with flight was permanently established.

Throughout the history of aviation, the Smithsonian has collected milestone craft. With no place to exhibit most of them, the priceless machines were stored—available for examination by researchers but not by the general public. Barnstorming biplanes, World War I daredevils, primitive helicopters, the first single-winged planes, World War I fighters, the first mail planes and passenger liners . . . all were acquired and placed in mothballs.

Finally, due largely to the efforts of General "Hap" Arnold, Chief of Staff

In the Milestones of Flight gallery, visitors study (from the floor) the Friendship 7 space capsule, the *Kitty Hawk* Flyer, the North American X-15 (first manned aircraft to exceed six times the speed of sound), and up in the rafters, a replica of Sputnik and a model of Mariner 2—the first interplanetary (Venus) probe.



Beyond the cluster of missiles, there's an M2-F3 "lifting body" (this is the same craft, rebuilt, that Steve Austin totals in the credits of *The Six Million Dollar Man*), and the full-scale American/Soviet Apollo-Soyuz spacecraft representing the first international manned space mission.

of the Army Air Forces, a bill was enacted into law. It called for the development of a facility "to memorialize the national development of aviation; collect, preserve, and display aeronautical equipment of historical interest and significance; serve as a repository for scientific equipment and data pertaining to the development of aviation; and provide educational material for the historical study of aviation." That was Public Law 722; it was passed in 1946.

In 1948, the *Kitty Hawk*, which had been on display at MIT, was added to the permanent exhibit at the overcrowded Smithsonian. With the legal authority but not the financial wherewithal, the Smithsonian could not proceed with construction of the "Air Museum" called for in PL 722. Other aircraft were acquired: experimental jets, the first rocket-powered planes, German V-1 and V-2 missiles, helicopters, a replica of *Sputnik I* and the actual back-up satellites of our early space program.

In 1966, PL 722 was amended to include the word "Space" in the name of the proposed museum, but still no facility existed.

Ultimately, funds were appropriated in 1972, and it was determined that the long-awaited National Air and Space Museum would be completed by July of 1976. Apparently, it took something as conspicuous as a bicentennial celebration to get the museum off the drawing board.

President Ford dedicated the structure on July 1, 1976. He called it the nation's "perfect birthday gift" to itself. His phrase was apt, and if you have not yet been to Washington to experience your share of this extraordinary gift, STARLOG hopes to tempt you to do so with the accompanying photo-essay.

There are three items of special interest that are not pictured here: "Cosmic Awakening," a planetarium presentation; "To Fly," a movie shown on a five-story-high theater screen; and a promise of things to come—advance information about a major exhibit currently in the planning stages that hopefully will be ready for viewing this fall. It will be, perhaps, the museum's most spectacular display: "Exploring the Planets."

Cosmic Awakening

Within the walls of the mammoth museum there's a full-sized 256-seat planetarium equipped with the latest in computer-controlled multi-media light and sound. The planetarium instrument itself (which recreates the night sky on the 70-foot-diameter dome overhead) was a Bicentennial gift to the United States from West Germany, where the machine, a Zeiss Model VI, was manufactured.

The planetarium, called The Albert Einstein Spacearium, also uses 200 movie and slide projectors, including a 360-degree horizon panorama system, various zoom projectors, a binary star projector, constellation outline projec-

tors, and many others. With their 2040-watt 36-speaker audio system, it is possible for sounds to follow images around the dome.

The current presentation "Cosmic Awakening," is totally successful in its intention: to inform the viewers concerning the present attitudes and knowledge about the size, shape, extent, behavior, and future of the universe. The presentation—beautifully narrated by accomplished actor Burgess Meredith—succeeds by being understated in its drama (so that overpowering vistas can sneak up on you and give you chills), by being timed as well as a high-budget movie, and by addressing its audience as adults (thus avoiding the near baby-talk of which many planetariums are guilty).

The half-hour long presentation is easily worth the \$1 price of admission.

To Fly

But if your stay at the museum is limited, and there is only time for one show, then spend your dollar on "To Fly." (These are the only two exhibits in the museum for which a fee is charged.)

Photographed in the IMAX system, on a strip of film nine times larger than standard 35 mm movie film, projected on a screen that is five stories high and seven stories wide, "To Fly" takes its audience (literally, it sometimes seems) through the history of aviation from post-colonial American balloon ascensions and culminates in a lift-off into space.

The writing is sketchy, the acting and directing pretty dismal when compared to, say, *Around the World in 80 Days*, but the photography, the effective use of the giant-screen system, the six-track stereo with a 50-piece symphony, and the inspiring message of mankind's aspirations and greatness—make this 26-minute film unforgettable.

One shot alone, that of rolling hills, a treetop, a valley beyond, and the dropping horizon photographed from an ascending balloon, is worth the price of admission.

The film was created by Francis Thompson, who won an Academy Award for his documentary "To Be Alive." That was a triple-screen movie made for the Johnson's Wax Pavillion at the 1964-65 New York World's Fair.

YOU CAN LAUNCH YOUR OWN ROCKETSHIP!!!

Special Offer to STARLOG Readers
from **Centuri** Rockets



Just imagine . . . you can enjoy the thrill of controlling your own field launch and recovery operation and at the same time you will be learning some of the mechanics and technology of aerodynamics. You don't need previous experience in model building. Centuri supplies complete easy-to-follow instructions so you can enjoy assembling your rocket body tube, fins, nose cone, parachute recovery system, etc. and then add the decorative decals

provided in each kit and finally your own creative painting and details for best appearance. Then you are ready to go into the field and stage your own actual launchings: (1) Ignition by electrical launcher, (2) Lift-Off from POWR PAD, (3) Burn-Out of fuel, (4) Coasting while delay charge burns, (5) Apogee, peak of flight, (6) Ejection, engine charge pushes out chute, (7) Descent, gentle parachute recovery (can be flown again and again).

E.S.S. RAVEN Flying Laboratory #5312 (Over 30" Long)

This is one of the new Super Big kits with impressive length and size, huge full-color decals, rocket display rack, baffle ejection and 2 big chutes for safe recovery. (Note: POWR PAD or similar launch system required.)

Skill level: Intermediate



IMPORTANT: Centuri rocket kits are safe for intelligent operation by persons 10 years and older. Younger persons should be supervised by adults.



EAGLE TRANSPORTER and POWR PAD #5314 (Complete Beginner Outfit)

Are you new at model rocketry? This is just the kit for you: a blow-molded Eagle with fin unit flight module, 13" in length, complete with launch stand (POWR PAD) unit and all accessories for full field operation. The Eagle shoots high into the air separating at apogee from the fin unit, each piece releases its own parachute, and the Eagle touches down perfectly on the four feet pads.

Skill level: Beginner to Intermediate

U.S.S. AMERICA Presidential Command Post #5310 (Length: 25")

Another Super Big kit, this exciting authentic design includes handsome full-color lettering and emblem decals, rocket display rack, baffle ejection and dual-chute recovery system. (Note: POWR PAD or similar launch system required.)

Skill level: Intermediate



Quantity	Item #	Description	Price	Postage	Total
	5314	Eagle Transporter with POWR PAD (Complete Beginner Outfit)	\$17.00	\$2.00	
	5310	U.S.S. AMERICA Rocket	\$ 9.00	\$2.00	
	5312	E.S.S. RAVEN Rocket	\$ 9.00	\$2.00	
	5609	POWR PAD Launch System (6-volt battery not included)	\$ 9.00	\$1.00	
TOTAL ENCLOSED:			\$		

Mail to: **STARLOG ROCKETS**
180 Madison Ave., Suite 1503
New York, N.Y. 10016

(Please allow 4 to 6 weeks for arrival of shipment.)

Name

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City

State

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Exploring the Planets

Dr. Robert Wolfe, of the museum staff, is curator for a new exhibit that will be in the space now occupied by demonstrations of "Air Traffic Control." It will be derived, Dr. Wolfe explains, from the new science "or art" of Comparative Planetology, in which planets other than Earth are compared to Earth.

"Exploring the Planets," says Dr. Wolfe, "will takes us through the history of planetary astronomy from the ancients to Copernicus and Galileo." The progressive story unfolds as the visitor pauses before displays of "the tools of exploration," Dr. Wolfe continues; "how we explore, with Earth-based telescopes, satellites, flybys, landers, landers with returning sections. . . ." And finally detailed exhibits depicting such future projects as a manned landing on Mars.

Dr. Wolfe hopes to incorporate a feature that surely will be among the highlights of the museum: **live television reception from the Jupiter and Saturn unmanned probes!**

There will be a display of one sort or another covering each of the planets and the asteroids, comets, and other features of the solar system. "We hope to put the visitor at the controls of a ship as it apparently flies over the surface of Mars; and we're planning a fanciful film showing a descent to the surface of Venus." There will also be a series of exhibits that present unresolved questions, "like," Dr. Wolfe adds, "the nature of the surface of Venus," which will be shown as it has been imagined to be in the past, as we know it to be now, and what aspects are still outside our knowledge.

Other planned exhibits include a computer with a built-in TV tube display that a visitor can "talk" with; a demonstration of the dynamics of planetary cratering, and a television monitor that gives "local" weather reports for each of the planets of our solar system.

Not every air and space vehicle known to man is displayed at the new museum. For instance, the fuselage of a 747 is longer than the building is wide, and a Saturn V rocket is four times taller than the museum. These and other titans of the sky are represented by models, movies, and art work. But aside from such obvious limitations as these, our National Air and Space Museum can truly be said to have everything, only a small portion of which has been mentioned or pictured here. And as is evident from Dr. Wolfe's current project, the museum continues to grow and become ever more effective in its ability to make visitors aware of mankind's (and the Smithsonian's) dream come true—of our obsession to leave the ground, to soar: to reach the stars. ★

NATIONAL AIR AND SPACE MUSEUM

Major Astronautics Artifacts on Display

Milestones of Flight

Rockets constructed by Dr. R.H. Goddard (March 16, 1926 and 1941)
Sputnik 1
Explorer 1
Mariner 2
Pioneer 10
Mercury Spacecraft "Friendship 7"
Gemini 4 Spacecraft
Apollo 11 Command Module

Life in the Universe

Mariner 10
Mars Globe
Viking Mars Lander Model
USS Enterprise Model

Satellites:

Early Satellites:

Explorer 1
Vanguard 1
MOUSE

Scientific Satellites:

Pioneer 5
Explorer 6
Ariel 1 & 2
Atmosphere Explorer (AE)
Pioneer 4
Solrad
Interplanetary Monitoring Platform (IMP) A & E
Lofti
ERS 12:17
Vanguard 2 & 3
Biosatellite 2
Explorer 10
Explorer 12
Uhuru

Meteorological Satellites:

TOS
TIROS
ITOS

Communications Satellites:

Score
Courier
West Ford
Relay
INTELSAT 1, 2, & 3

Other Applications Satellites:

Transit 5
Discoverer 13

Satellite Launch Vehicle

Agena B
Model Rockets:
11 historic model rockets illustrating the development of the hobby since 1954

East Gallery (112)

Lunar Orbiter
Surveyor
Apollo Lunar Module 2

Rocketry and Space Flight (113)

Historic Rockets:

Congreve Rockets
Hale Rockets
Whaling Rocket
Goddard Rockets and Components
Goddard Rockets (May 1926), "Hoopskirt" (Dec. 1928)
Turbopump (fuel)
Combustion chamber
Grooved nozzle
Smokeless powder rocket
Nitrogen evaporator
Tail section (1938)
Pressure valve
American Rocket Society (ARS); 4 rocket engines and test stand (1932-1941)
Von Braun A-2 Engine
Wyd Engines (2)
Tsiolkovsky Spaceship (1903, model)
Space station (1955, von Braun/Disney model)

Rocket Airplane and JATO Engines:

JATO motors (three; 1941-1945)
YLR-AJ-1 (B-47 aircraft JATO)
Super Sprite (U.K.)
Walter engine (Me-163 aircraft)
XLR-11 (X-1 aircraft)

Engines for Missiles and Spacecraft

V-2 engine (U.S.-made)
Vanguard engine
Titan 1 engine
RL-10 engine
H-1 engine
Mercury Retro motor
Gemini Retro Motor

Surveyor descent motor
Surveyor vernier engine
Saturn Attitude Control
F-1 Turbopump cutaway

The Future of Reaction Propulsion

Project Orion test vehicle
Ion engine (EOS)
Plug nozzle engine

Space Suits:

Deep Sea Diving Suit
T-1 Pressure Suit
Mark IV Pressure Suit
Gemini G4C Space Suit
The Apollo Space Suit
Fecal Containment System
Liquid Cooling Garment
Bio-Belt Assembly
Urine Collection and Transfer Assembly

Space Hall (114)

German Missiles:

V-2
V-1
Rheintochter 1
X-4
HS-298

Missiles and Space Launch Vehicles:

Jupiter C
Vanguard
Scout D
Minuteman III
Poseidon C-3

Manned Spacecraft:

Apollo-Soyuz Test Project: Command and Service Module
Docking Module
Soyuz Spacecraft
Skylab:
Skylab MDA/AM (Multiple Docking Adapter/Airlock Module)
Orbital Workshop (OWS)

Models:

Atlas
Atlas-Centaur
Atlas Agena
Titan III C
Thor-Delta
Saturn 1B
Saturn V
Skylab Cluster

Future Space Missions:

MS-F3 Lifting Body
Models:
Space Shuttle
Mars Mission Spacecraft
Modular Space Station
Expanded Capability Space Base
Lunar Base Model

Apollo to the Moon (210)

Spacecraft:

Able and Baker Primate Spacecraft
Project Mercury Spacecraft Freedom 7
Gemini 7 Spacecraft
Skylab 4 Command Module
Apollo Subsatellite
Pioneer IV Space Probe

Space Suits:

Alan Shepard (Mercury, Freedom 7)
John Glenn (Mercury, Friendship 7)
Neil Armstrong (Apollo 11)
Edwin Aldrin (Apollo 11)
Eugene Cernan (Apollo 17)

Lunar Surface Equipment:

Early Apollo Surface Experiments Package (EASEP)
Apollo Lunar Surface Experiments Package (ALSEP)
Solar Wind Composition Experiment
Lunar Surface Stereo Close-up Camera
Modular Equipment Transporter (MET)
Apollo Lunar Roving Vehicle
Lunar Hand Tools and Hand Tool Carriers
Apollo Lunar Surface Drill
Spacecraft Equipment (food samples, medical & hygiene equipment, photographic equipment)
Memorabilia

Miscellaneous:

LM Cockpit Mockup
LM Ascent Engine
LM Descent Engine
Apollo Fuel Cell
F-1 Engine Exhibit
Gemini Fuel Cell
Apollo Command Module Guidance Computer
Rescue Net and Hoist (Apollo 8)



The Star Trek U.S.S. *Enterprise*—the actual studio model used by Paramount in making the TV series—hangs majestically over the portal to worlds unknown. In *Life in the Universe*, visitors explore ideas concerning life elsewhere in the universe and forms it might take. In another exhibit in the museum, an exhibit devoted to science-fiction, a pedestal continuously shows scenes from *Star Trek*.

Left:

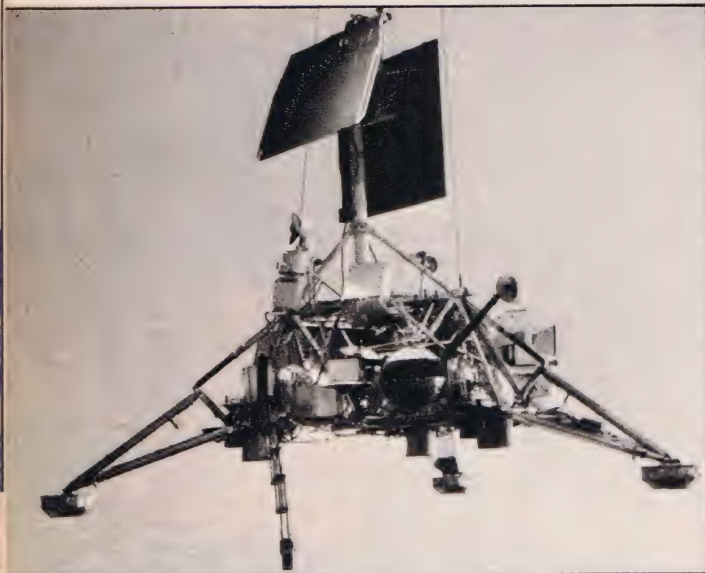
The theme of the air transportation gallery is "mobility for mankind—evolution of air transportation of people, mail, and cargo." This one vast gallery contains the design milestones of aviation: Douglas DC-3; the famous Ford Tri-motor; the Pitcairn Mailwing, the first plane designed to carry mail; the Northrop Alpha, an early monowing; Fairchild FC-3, which made the first nonstop flight from New York to Miami in 1928; and Boeing 247D, the first of the modern airliners and the first to average 200 miles per hour. Astonishingly enough, none of these are models or mock-ups; all are the real thing!

Right:

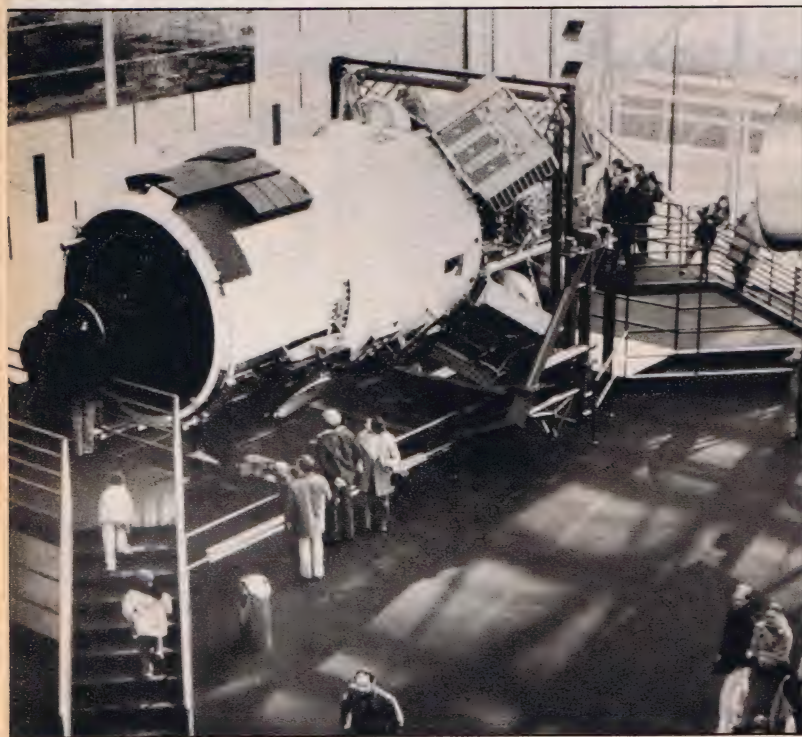
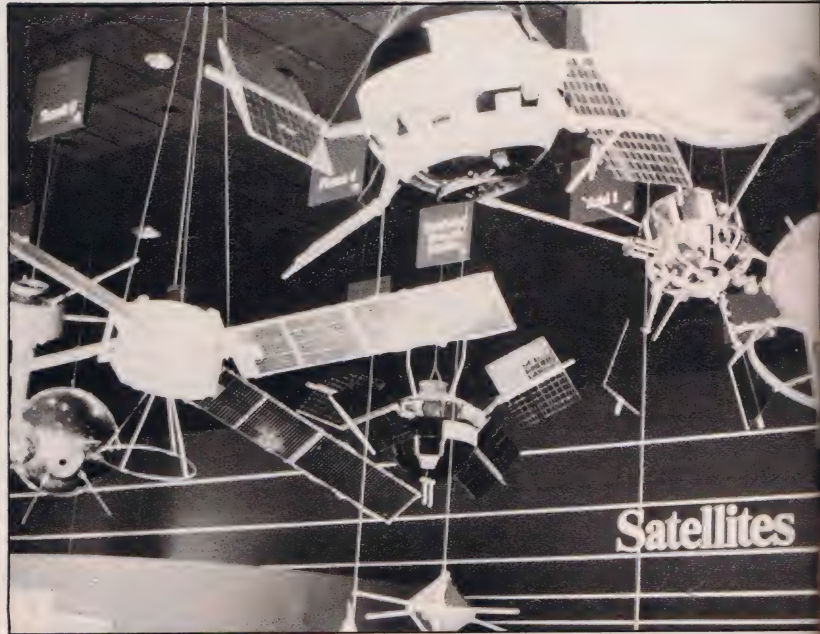
A line of the curious files through the Skylab Orbital Workshop.



The Surveyor made soft landings on the Moon. It hangs over the Lunar Lander at the east end of the building.



An entire room is devoted to sounding rockets, weather eyes, orbiting instruments, telescopes and the like.



Visitors walk up to a platform from where they can look into the multiple Docking Adapter and Airlock module of Skylab. This is an operational back-up unit.



A large art gallery contains paintings by some of America's most important painters (including James Wyeth, Robert Vickrey and Robert McCall). These visitors are looking at a painting of astronauts suiting up for a mission, by Norman Rockwell.



STATE OF THE ART

A column of opinion by David Gerrold



In 1972, I wrote a book called *The Trouble With Tribbles* (you may have heard of it). The first line was: "In 1966, I was a rabbit." The book was published (along with *The World Of Star Trek*) in February of 1973.

In February of 1973, I was a chimpanzee.

You see, at that time, Judy-Lynn Del Rey (who is one-half of Del Rey Books, the other half being Lester Del Rey) was the managing editor of *Galaxy Magazine*, which was just upstairs from *Award Books*; both were owned by Universal Publishing and Distributing. *Award Books* had bid on and secured the rights to publish the novel versions of the *Planet Of The Apes* movies, and now they were looking for a writer to adapt the fifth and last film into a book so that they could release it simultaneously with the movie.

So, they called upstairs to Judy-Lynn Del Rey and asked her if she knew a big-name science-fiction writer who would work cheap. He had to be (a) good, (b) fast, and (c) know his way

around a motion picture script. Judy-Lynn suggested me. And that's how I came to write the novelization of *Battle For The Planet Of The Apes*.

However, the real reason for doing it was that I wanted to be an ape. Not that that was part of the deal, but it wasn't too hard to arrange. A few phone calls to the studio, a savvy explanation of how I would probably do an article for some magazine or other about what it was like to be an ape in the film—which meant free publicity for them—and it was done.

So, that was why 9:00 AM, one warm California morning in February 1973, I went traipsing out to the 20th Century-Fox Ranch somewhere on the other side of Hidden Hills. The rest of the cast and atmosphere people (extras) had already arrived and been put in costume—they had the six o'clock call; because I was a non-essential part of the picture, I had to wait and come in after the important people were already taken care of.

A publicity man named John Campbell (no relation to the former editor of *Analog*) took me first to the costume

truck. There, the decision was made that I was too tall to be an orangutan. Therefore I would have to be a gorilla. I was a little taller than a chimpanzee *should* be, but they did have a costume that would fit . . . so, chimp it was. They found tunic, trousers and shoes to match, and then we were off to the makeup truck.

There, the makeup men started by testing the molded foam rubber pieces, called appliances, on my face to see which ones would fit best; there were six basic models of chimpanzee faces, each for a different face shape or size. Eventually, they settled on the "Roddy-Double" which is the design mask that Roddy McDowall wore in all of the pictures. It would look different on me (or on anybody who wore it) because of the differences in underlying bone structure and facial features.

The chimpanzee makeup takes three hours to put on. The makeup men begin by tying down your hair and then putting a stocking cap over it to hold it flat. It is painful, and at the end of the day, when it is removed, it is even more



To achieve the results on the left, the foamed latex prosthetic appliances are secured with spirit gum to author Gerrold's face.

painful—do not try to do anything at all to your hair, let it lay there and moan. If you touch it, attempt to comb it, even try to fluff it up, every follicle will scream in horrifying unison.

Then, they begin by attaching the appliance. There are two pieces: the larger piece covers most of the face; there is a big protruding upper lip, which covers your upper lip and all of your nose (yes, there are air holes), both of your cheeks—leaving holes for the eyes—and most of your forehead. The piece is finely cast, showing all kinds of features and wrinkles on the outside, but it is very light and very soft rubber, and it is smooth on the side that attaches to your skin. Even so, it is not something that you would want to wear on your face every day. (For one thing, the additional weight on your facial muscles would cause your skin to wrinkle, sag and age a little more quickly than otherwise.) After this is glued on with spirit gum, a kind of non-destructive rubber cement, the makeup man works his way around the edges, smoothing them out and blending them into the skin so that no lines show. The edges of the appliance are so thin that when they are properly applied, they don't show a crease. The smaller piece of the appliance fits over the chin and brings the lower lip out far enough to meet and match the upper one.

After both pieces are applied, a

matching brown makeup is put on all those parts of the actor's face that still show—eyelids, neck, the places around the edges of the appliance. Hair is then attached around these edges, sometimes only a few strands at a time. Finally ears and a wig are put on over the actor's head and the transformation of the face is complete.

The first thing you do is sit in front of a mirror and make faces at yourself. When you grin, the monkey staring back at you grins—when you puff your cheeks, he puffs his cheeks—when you wrinkle your nose or frown, he wrinkles or frowns. The appliances are extremely flexible and are designed to show the facial expressions of the actor underneath. In fact, the masks only look like masks when they are *not* moving, so that makeup men recommend that the actor always be doing something—puffing his cheeks or wrinkling his nose or working his mouth so that it looks like he is breathing or sniffing or just moving his lips while he reads.

The final step is the makeup of the hands. Your fingernails are painted black, your skin is painted brown, and the makeup men then glue a thick mat of black hair to the backs of your hands. The whole process, face, hands, wig, hair, etcetera, is very painstaking—the reason it takes three hours is that most of the makeup men in Hollywood are perfectionists. They have to be: the camera reveals the slightest error. For instance, if I had been playing a speaking part requiring a closeup, they would have had to blacken my teeth so that the camera would not see my own mouth inside the ape's. But,

as I was merely an "extra," this step wasn't necessary.

Once the makeup is on, then you get into your costume. That's when I was shown the proper way to monkey-walk ("Crouch low, swing your arms") and turned loose upon an unsuspecting world.

Well, not quite unsuspecting.

We rode a jeep down to the actual location site, which was about a half-mile away, and I was told to report with the rest of the stunt men.

Stunt men?!!

Well, yes, you see—today we're shooting the battle sequences and the only apes we're using are stunt men. But, don't worry, you won't be hurt.

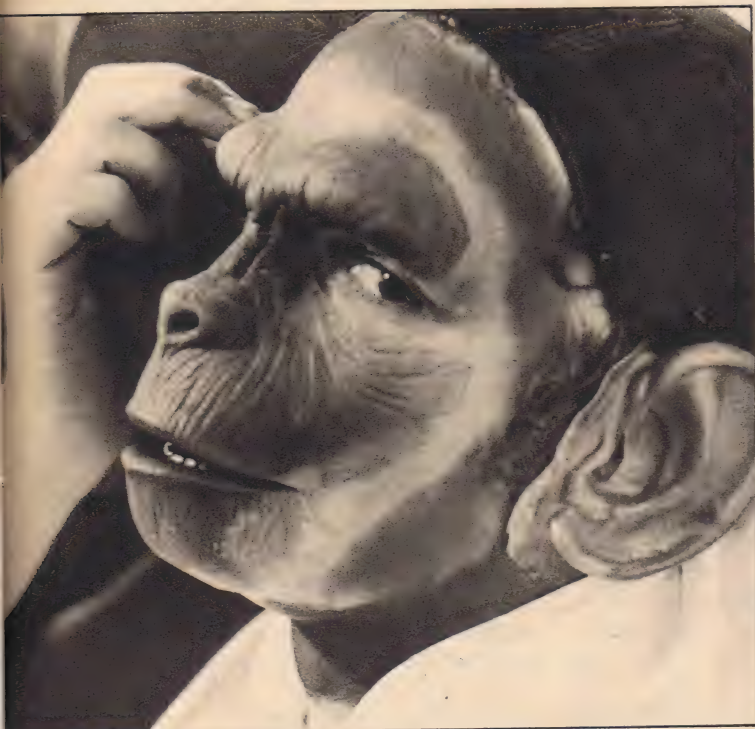
Oh. Terrific.

There were Roddy McDowall and Paul Williams (and somewhere Claude Akins) busy defending some trees—which were supposed to be Ape City—from Severn Dardin and a broken down school bus—who were supposed to be the mutant army. That was the battle. That shot was finished, and they began setting up the next. It takes at least a half-hour or more to set up each shot. Most of movie-making is waiting. It's almost as much fun as the army.

I used the time to get acquainted with the "stock company" of regular monkeys, and they showed me some more tricks of the trade—how to run like an ape, for instance. They knew immediately that I was a newcomer to the tribe. With very little practice, you can learn to recognize people very easily—not specifically as people perhaps, but as individuals, definitely. Every monkey has a distinct facial appearance; we did

EDITOR'S NOTE—

Mr. Gerrold has been given a free hand to express any ideas, with any attitude, and in any language he wishes, and therefore his column does not necessarily represent the editorial views of STARLOG magazine nor our philosophy. The content is copyrighted © 1977 by David Gerrold



Left: The edges are blended with liquid latex and powdered.
Above: David receives instructions from director Thompson.

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not all look alike. Interestingly, the chimpanzees generally hung out with other chimpanzees, the orangutans stayed with the other orangutans, and the gorillas kept mostly with the gorillas. It didn't matter that underneath the makeup we were all human—there was just that sense of "wanting to be with our own kind." Which also may explain why most of us apes tended to keep apart from most of the humans—besides, the humans kept *gawking* at us.

I discovered also that it was easier to "stay in character" as a chimpanzee than to try to ignore the makeup. When walking from one place to another, even if it was only to get a drink of water, it seemed natural to "monkey-walk" or even "monkey-run" which is a whole 'nother matter.

When we broke for lunch, I discovered that eating while made up as a monkey presented a totally new set of challenges. There are some things you should not even attempt—spaghetti, for example. It's best to choose something that you can cut into small bites, something that isn't drippy, and something that you can shove past the appliances on your upper and lower lips so you can get it all the way into your mouth—a fork comes in very handy for this. Some of the other apes were very proficient, others couldn't be bothered and removed their chin pieces so they could eat normally—the makeup men always did repair jobs after lunch. Others ate in front of mirrors so they could see what they were doing. I had a glass of milk, through a straw, some pieces of bread and some chunks of a banana. (*Talk about staying in character... Ed.*)

After lunch, we picked up a battle scene in which the school bus full of mutants crashes through the apes' barricades. I got to be one of the dead monkeys on the ground. This was my big scene. Nearby, one of the stunt men cautioned me, "If the bus comes too close to you, get up and get out of the way. Don't worry about ruining the shot."

That was reassuring.

They did three takes on it, the bus never came close, and then they blew up one of the tree houses for another shot (no monkeys needed here) and that was "a wrap" for the day. I'd been a dead monkey in one long shot. Oh, well.

Some of the apes immediately began pulling off their makeup as they started walking back to the makeup and costume trucks. I decided to wait for help from a makeup man. It looked painful. Several of those in the chimp makeup, it turned out, were black. There's no way to tell who is what color under the ape makeup, not even by the eyes—although it did seem that the ape

makeup was more convincing on the black stunt men because their eyes were brown. Blue- and green-eyed apes tend to look a little bit "masked"—brown-eyed apes are not only more realistic, they seem kinder-looking.

My last shock of the day occurred when I stopped at a urinal to relieve myself.

In the short time I had been in the monkey makeup, I had begun to think and feel like a chimp. However, there was one part of my anatomy that had remained unchanged, and as I stood above the urinal, I noticed a distinct dichotomy between my monkey hands and my human appendage. I felt distinctly schizophrenic. The human part of me felt like I was being molested by someone else's hands. The monkey part of me felt short-changed at having to pee through a human organ.

It is amazing how quickly you begin to feel like an ape once you get the hang of it.

I was destined to wear the ape makeup once again. Two months later, the first Los Angeles *Star Trek* Convention was held; EQUICON '73. It was at a hotel then known as the LA International, and only the immediate city attended. One of the planned events was an ape makeup demonstration. I would be put in the ape makeup again, and then I would emcee the masquerade as Cornelius from *The Planet of the Apes*.

This time, there was an audience watching to see how it was done. The makeup man was Werner Keppler, and he started working on me at 4:00. At 6:30, someone asked him how long it took to put the makeup on. He said, "Three hours." Then, the same person asked, "How long does it take to get it off?" And Werner answered in his thickest, most Germanic accent, "Ven I put it on, it *stays* on."

Oh, okay.

We finished at seven—we had a little bit of time before the masquerade had to start, so we went into the coffee shop to get me some dinner. The only thing on the menu that I could easily eat was . . . bananas and cream. The waitress didn't even blink.

Well, you figure it out—a hotel full of *Star Trek* fans, Andorians, Vulcans, giant tribbles, Hortas and Starfleet members, who's going to notice an ape eating a bowl of bananas with a knife and fork?

After the masquerade, a friend took me to the bar to buy me a drink—but the bartender glanced at me and said, "We don't serve monkeys in here."

I stood up on my chair and called him a racist. "I'm not a monkey, I'm a chimpanzee."

"Oh," he said, "I guess that's different. What'll you have?"

I ordered a banana daiquiri. ★

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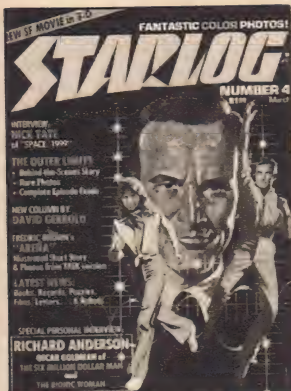


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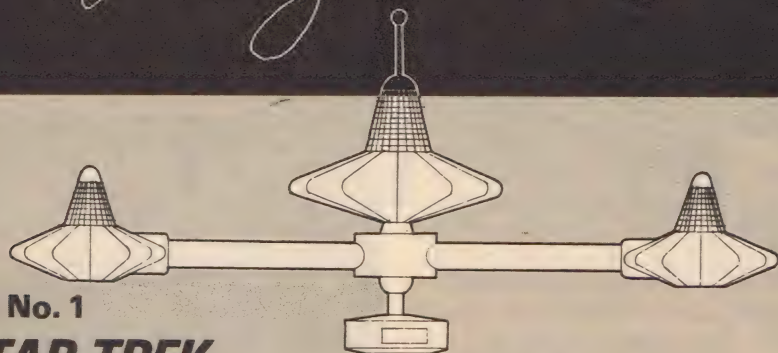
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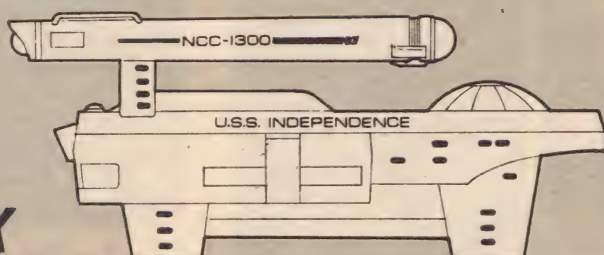
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(Continued from page 33)

three planets (including Vulcan) all of which have to be individually conceived. The really difficult thing with this kind of story, is that you have nothing to fall back on—or derive any ideas from—you have to invent it from scratch. You have to invent the society, the look of it, what the world looks like, how they exist; and you have to develop their life philosophy. It's very difficult!"

Then Allan cited an example of one instance. "We sometimes spent days and days discussing the whole background to a civilization in which we knew we were going to have a character that would come on for four lines and we'd never see him again. But unless you do that, he's just going to look like he wandered off 20th century Earth in a funny disguise."

Chris and Allan may have nothing to fall back on in terms of the conception of societies, and so forth, but they do have something to fall back on for the scientific aspects of their film—and its scientific plausibility. That something is NASA and Dr. Jesco Von Puttkamer! "He's just incredible!" Allan said. "We called him up early and said: 'Jesco, tell us about black holes. We got books and paper and memoranda—and we just learned everything we wanted to learn and understand about black holes; extraordinary. And he's very creative, too. For example, we called him the other day and asked him a nice simple question: 'If there was a message in an extremely advanced civilization, in the 24th century, what would that message be?' He went straight to work and came up with several suggestions!"

Allan also said that while Dr. Puttkamer was in San Francisco he made a statement that as a scientist he would never have "invented" the transporter. Puttkamer went on to explain to Allan that he would not have because he did not believe it to be within the realm of scientific plausibility.

That was as much information as Allan Scott would give out at the time of this discussion. But, it seems that he actually gave us a great deal, and if we piece all of it together some of the conclusions are cause for great excitement and anticipation.

Add to all of the foregoing the most recent development—Ralph McQuarrie has just been hired as Production Designer—and, at the very least, you come up with one hell of a science-fiction film! ★

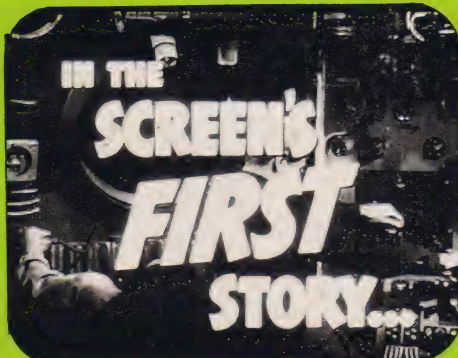
(Note: Ralph McQuarrie was the Production Designer for the film *Star Wars*, and painted the pre-production stills for that picture. STARLOG's No. 6 and 7 contain color reproductions of some of those paintings.)

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ROCKETSHIP X-M

From The Brink Of Oblivion

By ED NAHA

This is a science-fiction horror story.

Imagine being given a tour of MGM studios in Hollywood. After exploring the sound stages, the vast warehouses littered with costumes and props, the back lot, the film lab facilities and the executive offices, you are led into a huge, temperature controlled vault. "This," your company guide explains, "is where we store the original elements of all our feature films: the negatives, the unmixed optical and magnetic sound tracks, the fine-grains, the printing masters. Everything is here but the final release prints which are run again and again in local theaters until they are literally scratched and spliced to death."

You find this labyrinth of film canisters fascinating. As you roam up and down the aisles, you realize that you are

surrounded by some of the greatest movies of all time... all resting peacefully on massive shelves, identified by small name tags. You turn a corner and enter the section that thrills you most: SCIENCE FICTION. Never have you felt so close to the heart and soul, the very life force of this incredible genre. Before you sits *Forbidden Planet*, *The Time Machine*, *Village Of The Damned*, *Day Of The Triffids*, *2001* and *Logan's Run*.

But wait. The paper strip around the third reel of *Logan* has broken open. On close examination, you notice white chalky substance clustered around the edge of the film. Your heart skips a beat. It's mildew. The negative is deteriorating!

You express your alarm to the guide and he casually points toward the countless other films on the tall racks. "What can we do?" he shrugs. "The studio is concerned with *new* productions. These movies have had their day and have made their money. Sure," he adds as an afterthought, "we'd like to save them if it's not too much trouble, but who has the time to keep track of them all and restore them when they start to disintegrate? We run a movie studio here, not a museum for film buffs."

For a split second you feel certain that you are dreaming. This *has* to be a

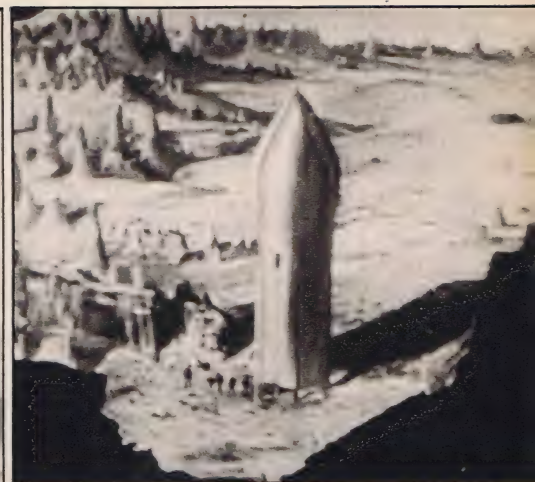
nightmare! The attitude you have just heard expressed, this casual lack of concern, will actually lead to the destruction of these film classics forever! You may never again be able to see a good print of the un-cut *Forbidden Planet*. Future generations of movie goers may only be able to *read* about the wonderment of *2001*. Logan may never again make his historic run across the silver screen.

This horror story is *probably* not true. These particular films are *probably* being well preserved at the moment. But, although *this* tale is totally fictitious, the attitude is very real. And every major studio is the culprit. Dozens of classic films are disappearing each year, largely through neglect. Twenty years from now, this fictitious tale of terror could easily become a grim reality. A reality that is already taking its toll in the science-fiction film world.

Just ask Wade Williams, a movie buff whose love for science fiction has turned him into a movie detective; a tracer of lost films.

In 1969, Wade, a then-hopeful movie producer from Kansas City, became intrigued with the idea of finding a print of the 1950SF classic, *Rocketship X-M*. Wade had first seen the film at the age of eight and promptly fell in love with

STARLOG is delighted to present, for the first time in our magazine, the artwork of Frank Kelly Freas. The painting of *Rocketship X-M* was executed specifically for this feature-spread. (The original is now hanging in our office for inspiration and admiration.) For those who may not know, Kelly is one of the most prolific and, by far, the most-honored artist in the SF genre. During the period of 1955-1976, Kelly received 10 Hugo Awards for his illustrations.



Above: a rare photo of the ship and crew after they've landed on Mars. The crumbling ruins were their first sign that they may not be alone. Left: The crew unearths relics of the ancient Martian civilization.

Below: This early lobby card has the title explained: **Expedition Moon*. Pressure from George Pal caused Neumann to later delete it.



it. "It was different from most science-fiction films at that time," Wade, now in his early thirties, recalls. "It was an imaginative story about man's first real attempt to reach the Moon. The characters were all scientists but they were very human, warm, well rounded. The technical predictions were amazingly accurate. It was just a great movie!"

Wade developed an almost fanatical devotion to the film, following it from local theater to theater, seeing it more than twenty times before it was ultimately sold to television in 1955. Once the *Rocketship X-M* saga hit the video airwaves, Williams took in more than forty viewings. "Television played the film first in prime time and then on Saturday morning kiddie shows," Wade bemoans. "It was usually cut to fit the shortened time slot with many important scenes missing. When color became the big thing on TV, the demand for black and white film decreased." Gradually, the rocket and its intrepid crew disappeared from the limelight completely.

While still in school, Wade began raving about the merits of the film to his classmates. Much to his dismay, no one had ever heard of it, let alone ever viewed it. "Someone should find out whatever happened to that film," he thought at the time. "Someone should make it available for other people to see and enjoy." And so, Wade became a film detective, of sorts.

A casual search for *X-M* yielded no immediate results. It was as if the motion picture had simply vanished from the face of the Earth. Wade increased his efforts, straying only to produce a few films of his own and earn a living by dealing in theatrical equipment. Along the trail, the young film buff found, to his amazement, that not only was the fate of *Rocketship X-M* a complete mystery, but the fate of many other science-fiction classics of the fifties as well. People just seemed to toss them away after their initial popularity had

faded.

Williams began a six year search by hunting down the film's producer, the late Robert Lippert. Lippert, one of the most prolific independent producers of the early fifties, was unable to help Williams directly, but did shed some light on the whereabouts of his brainchild. He recalled the name of the company that bought the TV rights to the film over a decade and a half before. The detective was on the right track.

Interested in the creation of the film as well as its present locations, Williams spent some time with the veteran producer, picking up bits and pieces of information about the origins of *X-M*. Wade remembers: "Mr. Lippert stated that Kurt Neuman, a writer and director, came to him in the late forties with the idea to produce a serious science-fiction film. He had a story outline and a budget of under \$95,000. Lippert, the largest of the independent film makers had an eye for what the public was buying. The flying saucer scare was well under way and the constant threat of atomic war was forever looming over a public that was ready for escapism on the screen."

"Mr. Lippert took a chance and produced *Rocketship X-M*. If he had any doubts about the film, they were soon laid to rest. *Rocketship X-M* made millions of dollars within months. Major producers jumped on the bandwagon and a new formula for screen entertainment was born."

Wade then stopped off in Hollywood to see if he could glean any information from the motion picture's director and writer, Kurt Neuman. Unfortunately, the talented movie maker had passed away a decade earlier. But his son, Kurt, Jr., was more than accommodating. Hard at work on the production team of Dino De Laurentis' *King Kong* re-make, he shared many behind the scenes anecdotes with *X-M*'s number one fan.

"A lot of critics accused *Rocketship X-M* of being a cheap quickie aimed at

stealing the thunder from George (The War Of The Worlds) Pal's big budgeted *Destination Moon*," Williams states, "but according to Kurt, his father had written the story before *Moon* went into production. Kurt Sr., an avid science-fiction fan and an insatiable reader, had come up with the idea of doing a film about a trip to space and approached several producers. Up until that time, however, science fiction was thought of in the same league as Buck Rogers and Flash Gordon. It was never taken seriously by major film makers. Neuman's idea was rejected constantly. By the way, the original story dealt with a trip to the Moon, with the *X-M* standing for Expedition Moon. Once Pal's highly touted film began, and it was two long years in the making, the intense publicity it generated made it hard for producers to ignore similar projects of this nature. And so, *Rocketship X-M* was finally slated to be launched on screen."

"During the middle of *X-M*, Mr. Pal threatened a lawsuit because of the similarity of the two scripts. Neuman altered the final part of his story and the entire Moon expedition wound up going to Mars instead. This was a fortunate change for all concerned. Had *X-M* been left alone, it would have appeared to be a black and white imitation of Pal's Moon epic."

The completed *Rocketship X-M* was quite an achievement. The plot detailed the adventures of four male astronauts and a female fuel expert on a doomed space flight. Says Williams: "Neuman's script is letter perfect. It has everything. The comedy and love interests hold but aren't overdone. Technically, it's excellent." The five explorers blast off on the first manned expedition to the Moon but problems plague them from the outset. En route, they encounter a meteor storm and suffer extensive damage which affects their power. The problem is soon remedied and the rockets are once again fired for an ap-



Left: Osa Massen was the expedition's rocket fuel expert. The fact that she was the only female was ignored—except by Lloyd Bridges. Above: That's not the Moon!

proach to the Moon. The new fuel mixture is so erratic, however, that the ship lurches out of control. The crew (Lloyd Bridges, Hugh O'Brien, Noah Beery Jr., Osa Massen and John Emery) black out and when they come to they find that they have been propelled into space and are now on a new course several million miles from Mars. After doing some hasty computation, they decide to chance a landing. They manage to accomplish the task and once on the surface of the red planet encounter the ruins of a once great Martian civilization that has been wiped out in a global nuclear war. They soon run across a race of mutants, deformed by radiation, living in caves like prehistoric man on Earth. The film then follows the attempts of the cast to cope with the situation. "The movie had all the elements of good science fiction; it challenged the imagination," Wade beams. "*Destination Moon* was so technically perfect that it could have been used as a training film. The human element was just not there, however."

While searching for the present day location of the film's distributors, Williams dug deeply into the *X-M* file, talking to many of the film's principals and discovering a score of amazing facts about the much ignored film. "I think *X-M* succeeded where *Moon* failed,"



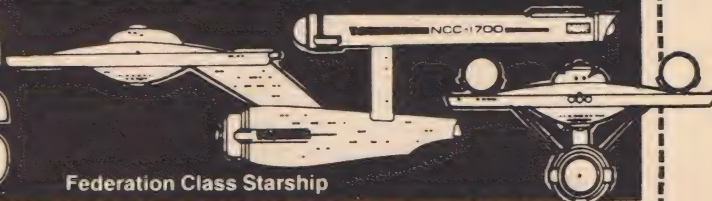
Lloyd Bridges stares in wonderment at the approaching meteor shower—the first time man has ever witnessed such an event from space. Its effect, however, was devastating.

Williams says. "It used all of the known space technology of the time and actually predicted, with some accuracy, the advent of space travel. It used a multi-staged rocket and the distance and travel time were exact. The Martian landscapes, compared to the recent photos sent back by the Viking lander,

were incredibly similar. The dynamic special effects by Jack Rabin and the matte work of Theabold Holsopple added to the overall quality of the film."

Williams went on to discover that the Martian landscape was actually shot in Death Valley, Red Rock Canyon, and the Lone River on a four week schedule. To give the Martian sequence an "alien" look, noted cinematographer Karl Struss (who did the original *Ben Hur*) used red filters when filming. The

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Martian scenes were then printed on a film with a violet red base, giving the entire sequence a reddish hue, although actually photographed in black and white.

The young film detective unearthed tales that increased his desire to save the film from extinction. The score, for instance, was done by the late Ferde Grofe, America's finest light symphonic composer whose "Grand Canyon Suite" is considered a contemporary classic. The arranging was done by one of Hollywood's finest, Albert Glasser, and the final music was an innovation in the film world. "Glasser and Grofe had a ball with the film," Williams muses. "At the recording session, Mr. Glasser used a theremin, an electronic instrument which emits a loud wailing sound. Ferde just didn't know what to do with it. The instrument responds with different pitched 'wails' as you move your hand close to the 'pick up' stick. Mr. Glasser conducted Grofe's music with one hand and composed theremin music with the other as they watched the actors walk up and down the Martian landscapes. The theremin was used again by Bernard Herrmann a year later for *The Day The Earth Stood Still*, and soon the instrument was a regular for science-fiction film soundtracks."

And what about those special effects? Says Williams, "They were extremely well done. Actors were combined with art work for Martian terrain. The giant ship on the launching pad was only a painting combined with live action in the foreground. The same goes for all the Martian cities. The meteors were cinders dropped past a high speed camera and then projected on a screen outside the ship. The work was so skillfully done that it is impossible to detect flaws."

After four years of sifting and searching through facts, Williams discovered that the TV distributors who had purchased the film in 1955 sold *X-M* to a film collector in California as part of a package of old movies. Williams called the cinema enthusiast immediately, only to find that the asking price for the only known 35mm print was simply beyond his means. Undaunted, the science-fiction devotee settled down in his Kansas City environs and worked two years on a film of his own, eventually earning enough money to purchase the *X-M* reels from the wealthy collector. Much to Wade's dismay, however, the original negative to the film could not be found.

A bit more detective work revealed that the negative had started to decompose back in 1965, and, as a result, was destroyed. Unwilling to give up his dream of totally saving *Rocketship X-M* from the brink of disaster, Williams instigated a nationwide search for any and all leads to another print of the film. One fine-grain positive print, made for

foreign release, was unearthed on the West Coast and Williams promptly hopped a plane to California. He arrived in time to buy all rights to the film and restore the fine-grain print to health. "In another six months or a year," he shudders, "that thing would have turned to jelly. *X-M* would have been lost forever."

He promptly made a new negative, including color stock to retain the eerie reddish tinge of the Martian landscape, and *Rocketship X-M* was brought back to life for future generations in its original form. A trailer for the film was later picked up at a theater auction, allowing Williams to claim ownership of every bit of footage released on the film.

Not content with retrieving *X-M* from certain oblivion, the stocky carrot-topped film buff from Kansas City has turned his attention to other classics of the genre as well. While hunting for the lost *Rocketship X-M*, he successfully rescued *Invaders From Mars* and *Flight To Mars* (made one year after *X-M* it used many of the same sets, including the interior of the spaceship itself). He has recently tracked down the original elements from a little-known European film entitled *Immediate Disaster* (a near twin, plot-wise, to the classic *The Day The Earth Stood Still*, featuring the latter film's star, Patricia Neal), which he plans to retitle and re-release as *Stranger From The Stars*. He has also stumbled across the only known 35mm negative of the vintage Buster Crabbe space swashbuckler *Flash Gordon Conquers The Universe* in its entirety. Still in the works is the search for the original elements of the infamous *Man From Planet X* and *Flying Saucer*, one of the first u.f.o. films ever made (in the late forties) which was nearly totally destroyed in a storage vault fire.

And what of *Rocketship X-M* itself? After twenty-seven years of gliding through celluloid limbo, what does fate have in store for the vintage voyager? Well, thanks to Wade Williams, plans are now being made to release the original score for the first time on a soundtrack album.* New negatives are now ready for nationwide theatrical release and, to provide a happy ending to this horror story, an entire new generation of film-goers will be able to see the adventure that set the format for so many later science-fiction motion pictures and television shows. The film that was largely responsible for creating a new formula in screen entertainment—the film that refused to die.

Rocketship X-M lives. ★

*Filmusic fans—watch the next issue of STARLOG for further information on obtaining the original soundtrack album of the music score to *Rocketship X-M*, composed by Ferde Grofe. We think that you will be very excited by our announcement.

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STARLOG PRESENTS THE MAGICAL TECHNIQUES OF MOVIE AND TV SPECIAL EFFECTS

Part II

SCIENCE FICTION'S IRON MAN... ROBBY THE ROBOT

By DAVID HUTCHISON

In all of SF film history, few personalities have been as enduring as Robby the Robot. Conceived for M.G.M.'s first foray into science fiction, he was an overnight sensation. *Forbidden Planet* owes its status of *SF Classic* largely to Robby and the concept behind his creation.

The *Forbidden Planet* is Altair IV, fourth planet of the mainsequence star Altair, in the constellation Aquila. The year is 2257 A.D. and a party of astro-

nauts have arrived to investigate the status of the Bellerophon expedition sent out twenty years earlier and never heard from again.

Robby is found to be the creation of one of the Bellerophon party's survivors, Dr. Edward Morbius. It is he who is sent out by Morbius to meet and greet the astronauts and bring them to his house. He serves as mechanical butler and handyman to his human creator. The newly-arrived crew are amazed to find that Dr. Morbius and his daughter Altaira are living in comfort,

served by a technology far beyond Earth's capabilities.

Dr. Morbius explains that the Bellerophon crew stumbled upon the artifacts of a long-extinct civilization called the Krell. The Krell's technology and science had advanced to such a stage that their final creation, a single enormous machine, was not only still in existence but continued to function and maintain itself during the 200,000 years since the Krell had become extinct. After experimenting with some of the equipment in one of the still perfectly functioning Krell laboratories, Dr. Morbius discovered that his intellectual capacity had been permanently doubled.

With his artificially boosted intellect Morbius deciphered some of the more "simple" theorems of Krell knowledge from a library view-screen in the Krell laboratory. It was through the use of this alien knowledge that Robby was created.

The astronauts and their captain, Commander J.J. Adams, are curious to know why it is that Morbius and his daughter are the sole survivors of the Bellerophon expedition. Morbius explains that a mysterious force—that never once showed itself—literally tore his companions to pieces. He and his daughter alone were immune.

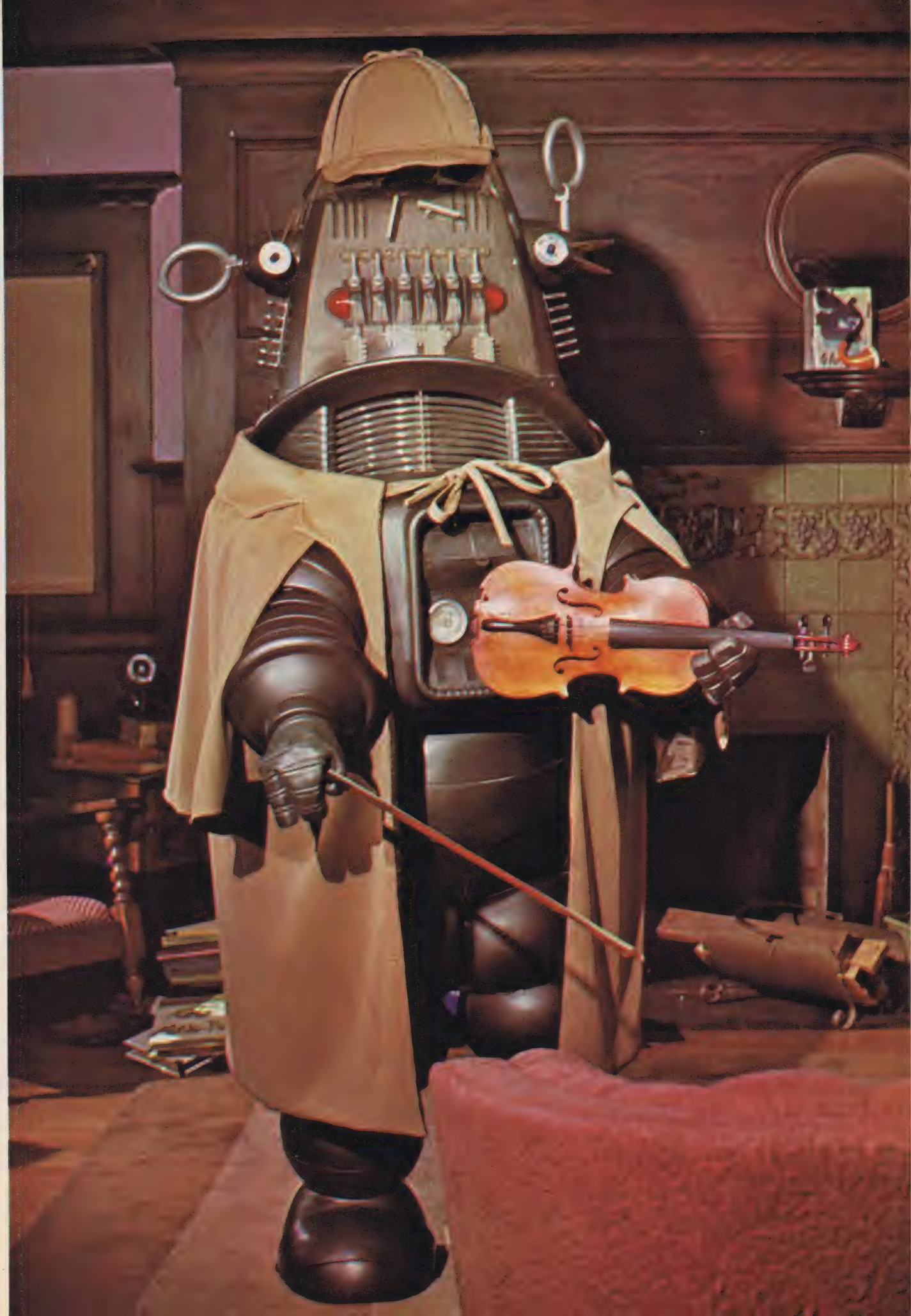
Dr. Morbius puts off any further questions by showing off his house and, in particular, Robby. His first bit of parlor magic is a demonstration of his household disintegrator beam which appears from behind a revolving cylinder activated by Robby. Morbius tosses up an orange which is instantly vaporized in the beam that runs from ceiling to floor.

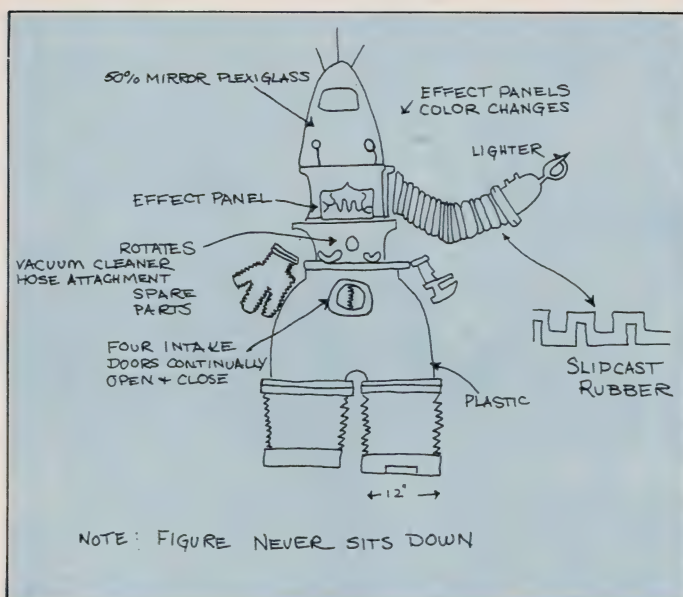
As a demonstration of Robby's selfless obedience, Morbius orders the



Above: Robby protects Dr. Morbius' home on Altair IV from all intruders.
Color: Robby the actor shows great versatility in his choice of roles.

© M.G.M.





Above: A. Arnold Gillespie's early sketch of Robby delineates the basic form of the robot, but the details continued to evolve.



Above: Frankie Darro suits up on the set, his face is blacked so that it will not show up in extreme close-ups. Frankie Carpenter is at far right. Below: Robby as chauffeur for Dr. Morbius.



Above: Robby's recent appearance at the Los Angeles Con was an occasion for younger fans to get to know him personally.



Photos: The Bill Malone Collection

robot to stick his hand into the beam. Robby begins to comply but is stopped just in time by a counter-order.

"You see, gentlemen," Morbius smiles, "complete, selfless obedience. Enormously strong, of course, he could easily topple this house."

"Mightn't such a force become a dangerous weapon in the wrong hands?" asks one of the crewmen.

"No, gentlemen. Not even if you cast me in the tired role of a mad scientist of the tape thrillers . . . because of a built-in safety device. Might I borrow that formidable looking side-arm of yours, Commander?"

Commander Adams hands his D-R pistol to Morbius who hands it to Robby as he beckons him over to the patio. Morbius instructs Robby to aim the gun at a shrub on the patio and to fire. The shrub vanishes instantly in the pistol's beam.

"Do you understand the

mechanism?"

"Yes, Morbius. A simple blaster."

"Come around here, then, Robby." The robot follows Morbius over to Commander Adams.

"Aim it at the Commander." Robby complies without hesitation as Commander Adams waves off the protests of his crewmen.

"Aim right between the eyes."

The robot's arm moves up a few degrees so that the pistol is pointed squarely on target.

"Fire."

A curious grinding sound and sparking of lights within the robot seems to make the entire machine tremble visibly, but the robot's hand will not (or can not) close on the trigger.

"You see gentlemen. He's entirely helpless—locked in a sub-electronic dilemma between my direct orders and a basic inhibition against harming rational beings. If I were to allow that to

continue he would blow every circuit in his body. Order cancelled."

The flashing whine ceases and Robby returns to normal once again.

This scene forever imbues Robby with his most winning characteristic—benign power. Awesome force, that can never be used for evil.

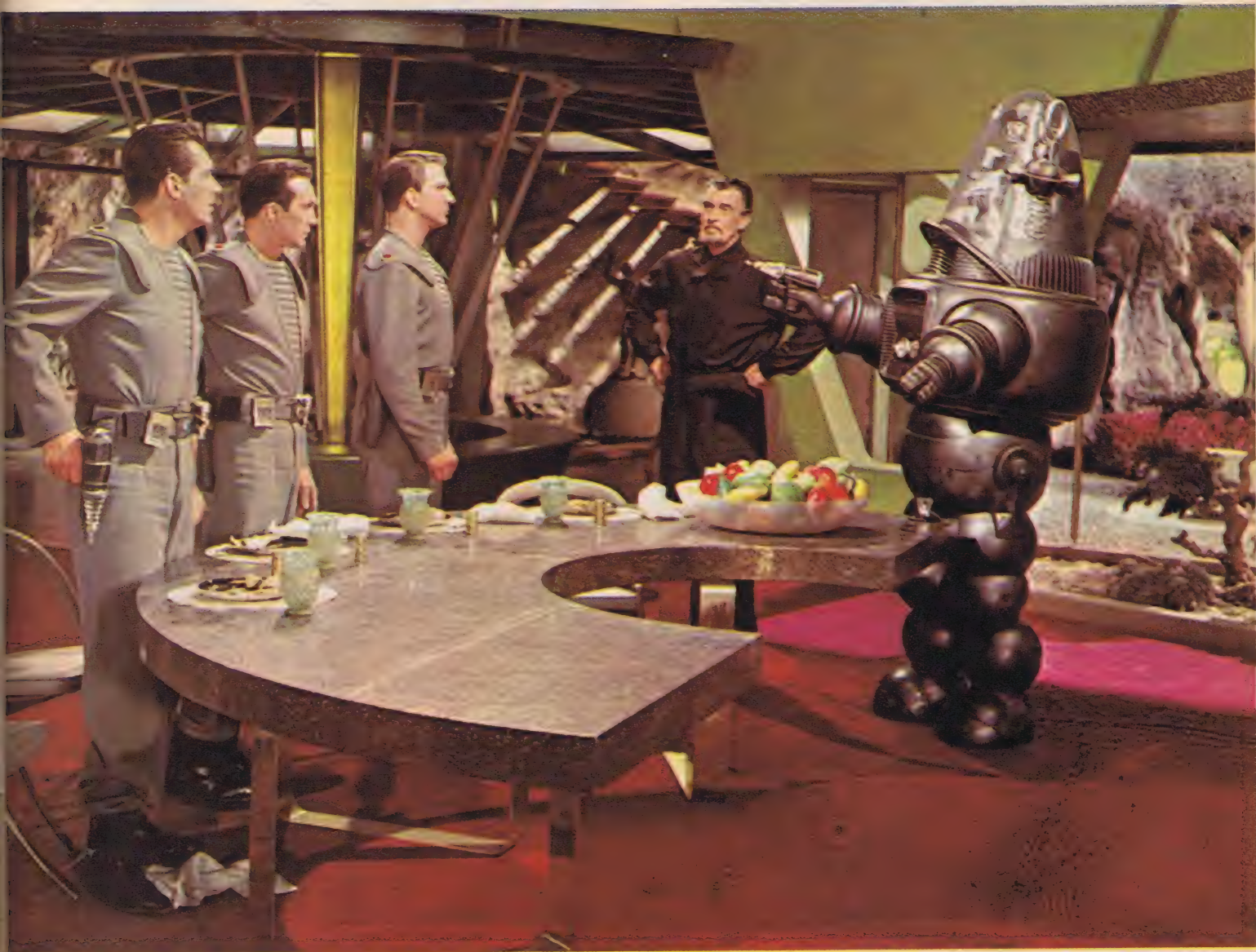
During the course of the film, Robby's many witty exchanges with the crew establish him not only as a *thinking* machine but one with a sense of humor!

One of the crew remarks in passing that the air of Altair IV is nice—lots of oxygen.

Robby replies: "I rarely use it myself, sir. It promotes rust."

The dialogue excerpts from *Forbidden Planet* have been condensed and paraphrased in the interest of economy.

This is the second part in STARLOG's feature series on *Special Effects*. **Part I—The Use Of Miniatures** appeared in issue No. 6.



Photos: © M. G. M.

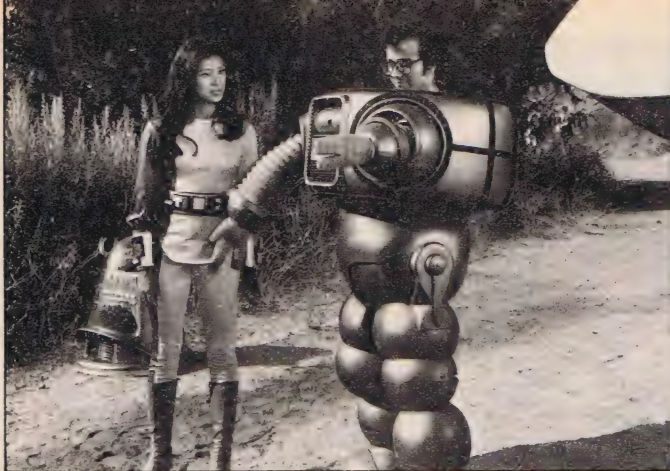


Above: Earl Holliman as the cook for United Planets Cruiser C57D's crew, thanks Robby for synthesizing 50 gallons of bourbon. Note Robby's control cable at lower right.

Above: At home on Altair IV, Dr. Morbius demonstrates Robby's basic inhibition against harming rational beings using Commander J.J. Adams as the guinea pig.

Below: Robby's "beams" are able to neutralize the power of a D-R pistol. Bottom: Robby's rendezvous with the crew from Earth; he is driver and power source for the car.





Robby on location with *Ark II*; Bob Short of Don Post Studios as his operator. The *Ark II* production team would have used Robby in his original form, but Bill Malone wanted him to have a new look, so he was equipped with a new head and arm mounts.



Robby is also called upon to manufacture a tremendous diversity of materials, giving us a good idea of his versatility and importance as a tool. He produces a diamond studded dress for Altaira:

"Robby, I need a new dress."

"Again?"

"Oh, but this must be different from all the others. More beautiful and cover all over."

"Radiation-proof?"

"No, just eye-proof will do. And with star sapphires."

"Star sapphires take a week to crystalize properly. Would diamonds or emeralds do?"

He produces 2 tons of lead shielding for the astronauts:

"My morning run of Isotope 217."

He produces all the synthetic food stuffs for Morbius and Altaira plus 50 gallons of genuine Kansas City Rocket Bourbon for the crew's cook.

By the end of the film Robby's enormous strength and benign intelligence (coupled with good humor) proved an unbeatable combination—one of the most original creations in SF film. How could M.G.M. lose?

That M.G.M. didn't know what it had in Robby was made painfully obvious by Robby's second screen appearance for M.G.M. in *The Invisible Boy* (1957).

Here Robby is the mechanical assistant to a scientist and playmate to the scientist's son. The enormous computer in the scientist's laboratory goes berserk and, in a fit of megalomania, decides to take over the world. The computer gains complete control of poor Robby who then becomes its ambulatory arms of destruction.

The boy becomes invisible and tries to save Robby from the computer and the earthly armies bent on destroying both Robby and the computer. There is a good deal of footage with Robby dealing out destruction and death while under the control of the computer.

This perversion of Robby's original concept was not well received. His original *Forbidden Planet* concept was too strong to be pushed aside by a weaker one.

Science fiction languished in the doldrums for the next ten years, making Robby's appearances quite sporadic. Such appearances as he did make were greeted with enthusiasm by SF fans to whom Robby was an old friend. Even those who had never seen him before found themselves irresistibly drawn to

his charm. When he made his well publicized TV appearance on *Columbo* a few seasons back, that episode received one of the highest ratings of any episode in the series.

It was certainly something of a comeback for the fellow who, in the interim, had appeared with Gail Storm on *Oh, Susanna*; a couple of episodes on the legendary *Twilight Zone*; an appearance on *American Bandstand* and two guest shots on *Lost in Space*.

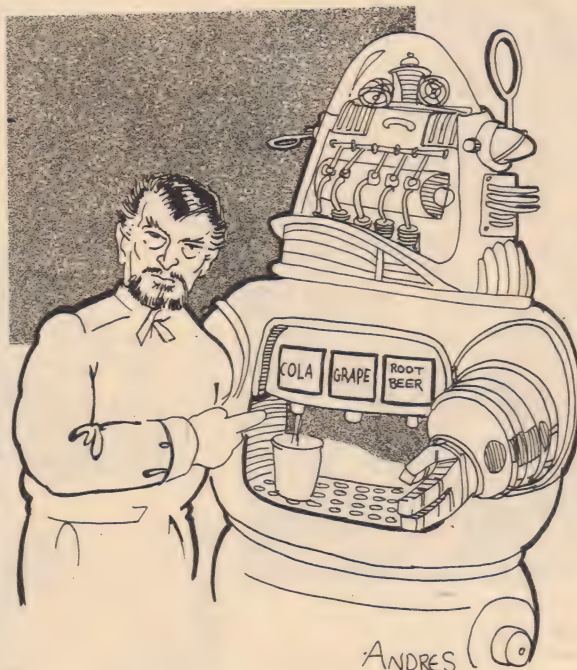
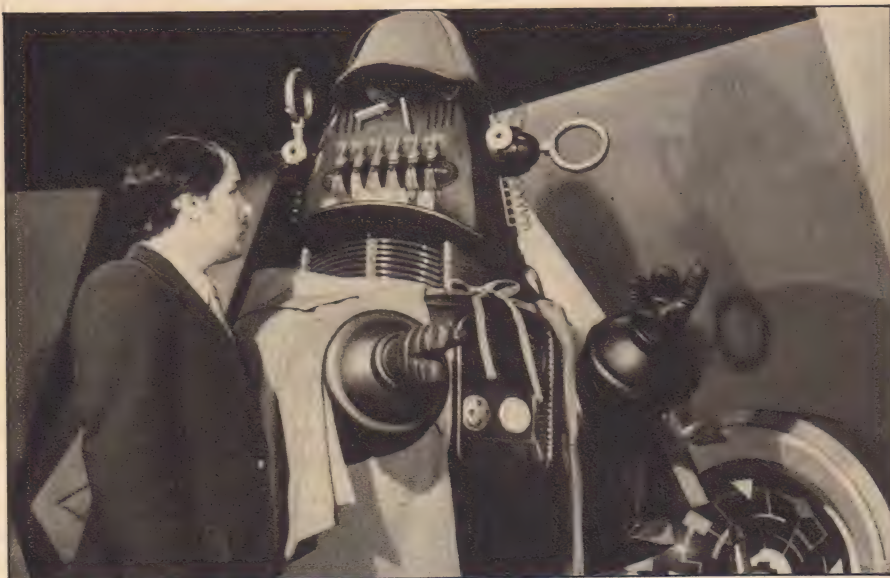
His appearance on *Lost in Space* settled a long standing argument that the Robinson's robotic companion was merely Robby in make-up. Of course, Robby was staunchly defended by his loyal, older fans, but the younger SF'ers could not be convinced until his appearance in the rather silly "Duel of Robots" episode.

The hue and cry over this similarity of

design stems from the producer, Irwin Allen. Allen wanted a robot as similar to Robby as possible, so he hired Bob Kinoshita as art director and designer. Mr. Kinoshita had done much of the final design of Robby in *Forbidden Planet*.

It couldn't be Robby, of course, since the Robinson robot served as little more than a target for Jonathan Harris' vocal venom. One gets the feeling (no offense to *Lost in Space* fans) that Robby would be slumming it to travel with the Robinsons in their version of a space-age *Father Knows Best*.

More in keeping with Robby's nature was his appearance on *The Thin Man* with Peter Lawford. In an episode entitled, "The Robot Client," Peter Lawford is hired to defend Robby on a murder charge. It was reassuring to his loyal fans to have his innocence con-



Above: Robby in cape and deerstalker with Jerry Mathers on the set of *Holmes and Walston*. Jerry, as Walston, inherits Robby who has been programmed with 3,000 volumes of *Sherlock Holmes* by an eccentric inventor. Walston activates Robby who believes he is Sherlock. The pair of SF detectives have plenty of mysteries to solve in this pilot directed by Bill Malone of Don Post Studios. Left: This cartoon of Robby is "not too far from the truth" since one of his hands was originally conceived of as a beverage dispenser.

STARLOG gratefully acknowledges Bill Malone of Don Post Studios for his invaluable assistance in assembling the illustrations for this article.

STARLOG is considering publishing the blue prints of Robby as a special foldout, if sufficient interest is shown.

firmed. One can only relish the image of Robby on the witness stand being hammered at by some bespectacled, mousey district attorney, yet remaining utterly aloof and being perfectly logical and charming.

About the time of the M.G.M. auction and before Robby's *Columbo* come-back, Robby, stored in the rubble of the dying studio's musty prop vaults, had fallen into a state of extreme disrepair. Robby was dead as far as M.G.M. was concerned and they had neither the capital nor the interest to renovate and refurbish their famous property.

At the auction, however, Robby was conspicuously missing. The *Forbidden Planet* saucer was for sale along with a number of the original props, but no Robby. Attending the auction and bent on finding Robby was Bill Malone, a young film technician and special FX designer, who was also an SF fan and particularly fond of *Forbidden Planet*.

After a good deal of legwork, Bill found someone who knew about him, but said that he wasn't for sale. Bill continued to ask about him at the now defunct studio, but wasn't able to buy him. Finally, however, the executives at M.G.M. were advised of the many thousands of dollars that would be required to restore him. M.G.M. was going into the hotel business in Las Vegas, so Robby was stripped, gutted and sold to *Movieworld Museum* in Buena Park, California.

His *shell* stands there today, a little sadly, and quite lifeless.

Robby, however, is still very much alive. "A robot never really dies," says Bill Malone, "you can always rebuild him!"

Bill went to the *Movieworld*, took photographs and measurements from the original and decided that he could be rebuilt. "This was a bit premature, since I knew nothing about plastics at the time" (the significance of which will later become apparent). But he spoke with those members of the *Forbidden Planet* design team who were still alive and who remembered anything about the technical details of design and construction. "And about a year-and-a-half later Robby was reborn."

Shortly after completing Robby II, Bill took him to a *Star Trek* Convention (Equicon 2 in L.A.) where he was a big attraction. "Everyone loved him," Bill remembers. SF fans are a loyal group.

That October Robby was featured at a Halloween party commemorating *Forbidden Planet*. Robby's picture appeared in the *L.A. Times* the next morning. This prompted a telephone call from Universal Studios, who wanted to feature him in a *Columbo* episode—Robby's *career* was reborn, too.

Bill Malone's reconstruction of Robby is painstakingly accurate and yet takes advantage of modern developments in electronics. A. Arnold Gillespie, the original designer, along with Arthur Lonergan (most recently of *Logan's Run* fame) and Bob Kinoshita were able to extend their remembrances to aid Bill's project.

Electronically, Robby II is much

more compact—since transistors were not in common use in 1955. The original Robby had to be operated by an extension-cable-harness which ran to his off-stage controls and power supply. In long shots the cable could be dispensed with, hidden, or temporarily replaced with a couple of motorcycle batteries (which could be rigged inside for short periods of time). Bill's version is entirely self-contained and requires no external cable or power supply for the various lights and motors that make up his visual effects.

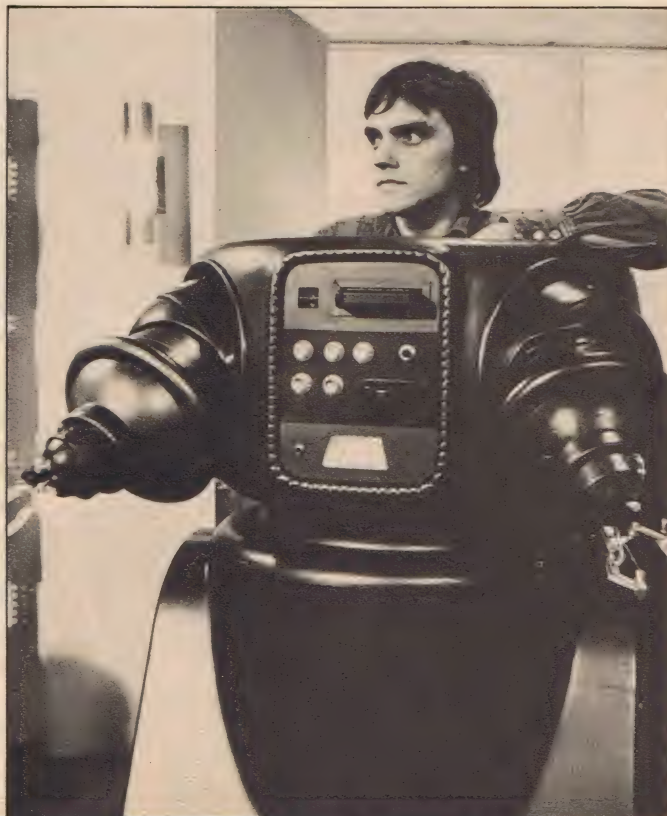
The original electrical work was done by Jack McMasters, with plastic construction by Cliff Grant and Rudy Stengler. The shell consists almost entirely of vacuum-molded plastic with a small number of machined aluminum fittings, grips, and rails. Even with this extensive use of plastic Robby weighs in at a bit over one hundred pounds—a hefty weight to carry around for whoever is inside. And that is just what the operator has to do. Robby is a *costume* much like a suit of armor, but more physically limiting and uncomfortable. "You can get up to a pretty good clip walking," said Bill, who has had the experience, "but stairs, steep ramps, running and sitting are out of the question. It would kill you if you ever toppled over!"

Anne Francis, who played Morbius' daughter, Altaira, told Bill a story about the filming of one of Robby's first sequences. Frankie Darrow had been walking around inside Robby trying to get used to the weight and heat



Above: Art Director Bob Kinoshita did much of the final design work for Robby. He was also hired by Irwin Allen to produce the Robinson's robot. They appeared face-to-face in one episode.

Below: For *Columbo*, the producers thought Robby might be a bit too cute—that he might upstage Peter Falk, so they wanted to remove his legs and mount him on a fifty-gallon oil drum.



for a couple of weeks before the first shooting day, since a great deal of physical stamina is required to last through the day.

Robby's first take was the scene in which he drives up to the flying saucer in a little ground car to take the Commander and crew to Dr. Morbius' house. The car drives up to the saucer, stops, the metal gates in front swing open and Robby walks out to greet the Earthling visitors. The set crew had raked the dirt up to the edge of the ground car so that there would be no actual step down for the robot, merely a small incline. Robby took his first step forward and started to fall. Immediately, three prop men rushed onto the set and caught Robby only inches above the studio floor. A badly shaken Frankie Darrow was replaced by Frankie Carpenter for most of the rest of the film.

Besides the danger of toppling (which Bill admits to having almost done several times) there is the danger of *electrocution* of the operator. Robby is famous for the voice actuated neon tubing. The neon tubing power is boosted up from a spark coil which produces 40,000 volts! There are also seven motors to contend with: twin motors to operate his side scanners; a motor for the gyro assembly on top; a motor to operate the cam action at the base of his head that indicates when the robot is thinking; and three motors in his "stomach" animating that display.

Bill says he has never had a serious accident with Robby and that the pleasure of operating him for the thrill of those around him far outweighs any minor inconvenience for the operator. It's part of the job, and you either love it or you don't do it. Bill loves it as much as his audiences love Robby.

The robot disassembles into three pieces, for convenience of storage and transportation as well as facilitating "suiting-up" the operator (which only takes about ten minutes). There is the leg section, the torso, and the head unit. Bill has provided a walk-in stand for the robot so the operator can rest between takes and still not have to support the entire weight of the mechanism. There is even a portable compressor to air-condition the operator.

Originally, Mr. Gillespie had envisioned his robot with interchangeable tool-like hands that would perform various specialized tasks. Six different designs were suggested. In the film only the familiar two-fingers-and-thumb configuration was used, with the exception of the last scene. Aboard the saucer, on the trip back to Earth, Robby is fitted with special hands to operate the saucer's star-drive controls. Robby is also seated in this sequence—the only time he has ever been seen in that



posture. Only the torso and head were used with false legs constructed of cardboard hiding the operator's body.

Some of the other suggested hand pieces (never actually built) included a cigarette lighter finger and a beverage dispenser hand with a dial to select whatever drink desired. This was obviously an attempt to provide substance to the premise that it was Robby who manufactured the synthetics that kept Morbius and Altaira alive on (essentially) a desert planet.

Perhaps one of the reasons that Robby has remained so popular is that his personality is unique in SF films. All too often the machines and computers used function as mere harbingers of terror and destruction, reducing the plot to the commonplace: man versus renegade robot, or versus paranoid computer. Most SF films (this has not been the case in literature) have assumed terror and destruction to be the only "drama" possible for these creatures. Robby, the epitome of amiable alien intelligence, is unique in this regard and stands clearly alone.

In a TV pilot proposed by Don Post Studios (of which Bill Malone is vice-president) entitled *Space and Beyond*, Robby would be featured as Chief Engineer on a rescue spaceship. Robby is found by an outer space rescue crew and they take him along to see what can be learned from this mechanical product of an alien race. Robby is not too keen on giving information away gratuitously, however, without knowing what mankind intends to do with his knowledge. He is designated chief engineer, though,

Left: Robby in "Mind Over Mayhem." Bill Malone designed a special mobile pedestal for Robby as well as mechanical hands and a new instrument plate for the torso. Below: Robby has been asked if he is a good enough actor to play "other" roles. In *Hollywood Boulevard* he has a cameo sequence as a waiter fond of mimicking Rhett Butler as he delivers food and drink to customers.



for he possesses the ability to go places and do things that his human companions would find impossible or dangerous.

This concept, wonderfully in keeping with the original potential of the robot, is certainly unique for SF-TV and promises a good deal of visual excitement and mind-boggling entertainment. It has not yet been sold, but the studio is still trying.

Robby's most recent appearance was on Filmation's *Ark II*. It was contemplated that Robby might be a good addition to the *Ark II* regular staff, but in the episode he is not trusted as being a "good" robot and must prove himself, which he does by saving a village from a poisonous gas. Unfortunately he destroys himself in the process.

Again Robby is cast in the sort of sympathetic role for which he is so famous: the unique thinking machine, or tool, that mankind cannot turn against itself. Does his self-immolation at the end of the *Ark II* episode eliminate any further appearances?

Not at all, says Bill Malone. That's another unique characteristic of robots—they're a bit god-like. . . .

"You see, a robot never really dies, . . . you can always rebuild him. . . ."★

STARLOG's special FX series will continue in No. 8 with a discussion of model animation, stop-motion photography, Dynamation mattes, and miniature projection.

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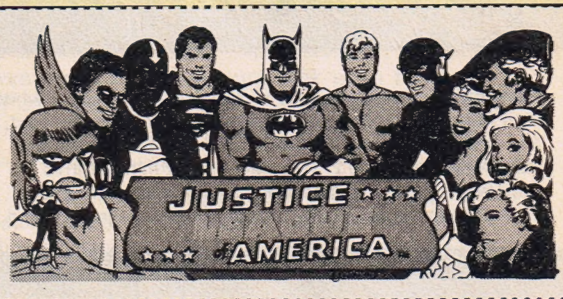
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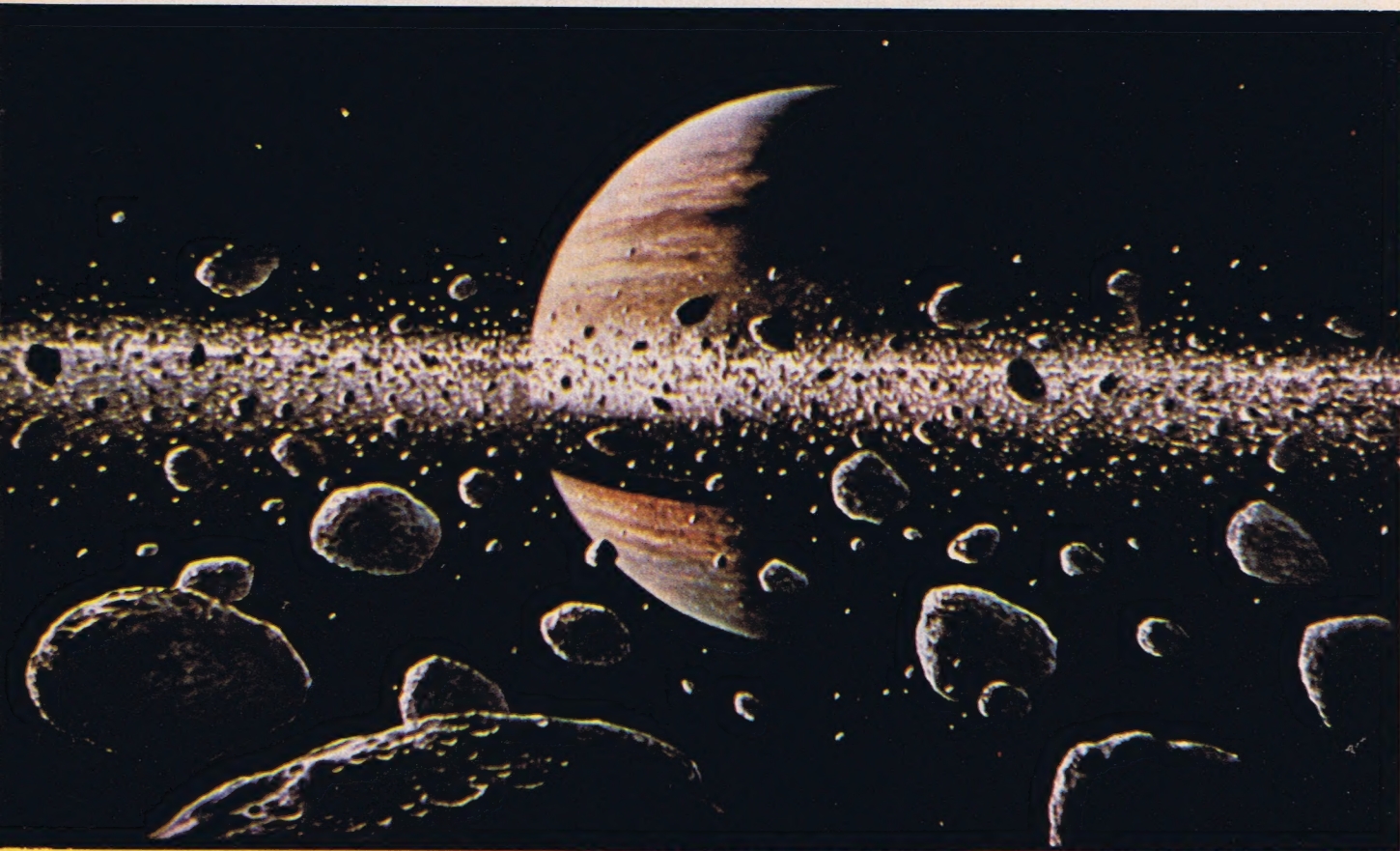
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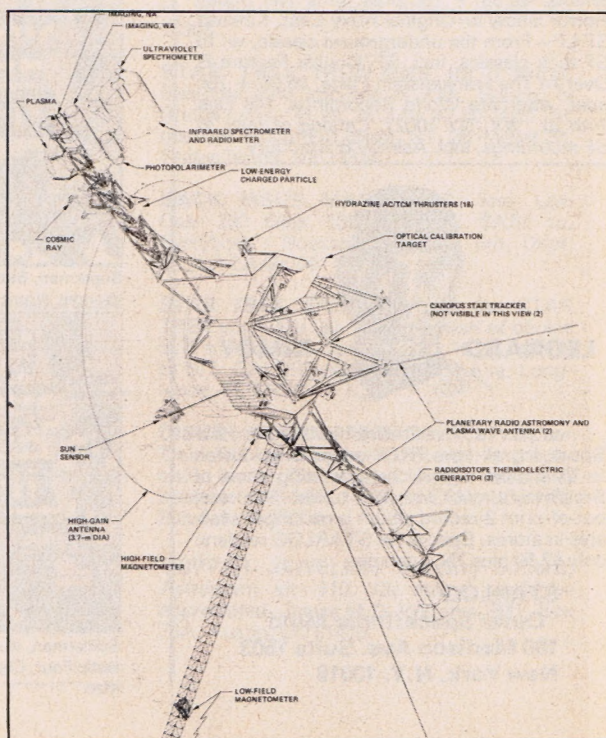


Mankind's first close-up view of Saturn is due to occur when the Pioneer 11 Jupiter probe arrives there in 1979. Our next, and even closer views are due in 1980 and '81 with the arrival of Voyagers 1 and 2. This view from within Saturn's rings was imagined and painted by Don Dixon. It might be very close to the actual televised pictures Voyager will send.

Voyager Spacecraft weigh 1,753 pounds, are powered internally by atomic batteries (they will travel too far from the Sun to employ solar power), and carry the largest spacecraft communications antenna yet: a 12-ft dish. Instruments include a new television system expected to provide extraordinarily clear images, cosmic ray detectors, and radio-astronomy equipment.



Above: The Voyager mission is made possible by the rare alignment of Jupiter, Saturn and Uranus all on the same side of the Sun. The flightpath of the Voyager is clearly shown in this NASA painting. The most interesting part of this diagram is that it is lacking an important celestial feature—the rings of Uranus. The Voyagers will study them closely.



THE LURE OF THE OUTER PLANETS

The compulsion to follow that outward pull—across the sea, into the air, into space, to the Moon, to the nearby planets, the distant planets, the stars. . .

From the birth of science fiction, writers have envisioned our first encounters with the most mysterious planets—Jupiter and those beyond. Jules Verne, in his novel *Hector Servadac*, took his readers on a grand tour of the outer solar system on the head of a comet. It collides with Earth and carries away (a la *Space: 1999*) a number of hapless Earthlings. In 1877 Verne wrote:

"The distance between the comet and Jupiter was, by 1st October, reduced to 430,000 miles—about twice that of the moon from earth. If Jupiter were to change places with the moon, its disk would appear thirty-four times larger than the moon's; so it is easy to imagine its wondrous brilliance when surveyed from the same distance.

"The belts parallel to the planet's equator were quite distinct. Those immediately to its north and south were of a dusky hue; those towards the poles were alternately dark and light. . . The composition of the belts and spots alike was beyond the astronomer's power to ascertain. . ."

Since Verne wrote that a century ago, astronomers have learned what those belts are made of; we have learned so much about the outer planets in fact that questions even Verne never posed now remain to be answered.

Both Jupiter and Saturn are now known to be composed largely of hydrogen and helium—the elements suns, not planets, are made of. Was our system nearly a binary star system? A triple one? And what of Uranus and Neptune; were these distant gaseous planets nearly stars as well? What would an answer tell us about the formation of our solar system (and perhaps all similar star systems)? Why is Pluto *not* gaseous then? Was it an interstellar wanderer trapped by the gravity of the Sun?

Most intriguingly, there's a possibility that life exists even so far away from the Sun. One of Saturn's ten moons, Titan, has an atmosphere of methane and hydrogen that is denser than the air of Mars and seems equivalent to the "reducing" atmosphere that existed on Earth at the time life is believed to have formed here.

Another of Saturn's moons, Iapetus, puzzles scientists because one side of it is highly reflective (this is where Arthur C. Clarke placed the "star gate" in his novel of 2001) while the other side is dark.

And Saturn's rings—what are they? How were they formed? Which other planets have them as well?*

Jupiter sends out peculiar radio pulses (shades of 2001) which are now believed to be caused by the large moon Io which regularly orbits through Jupiter's fantastically powerful magnetic field and "switches" the radio signal on and off. Why? How?

Thanks to the Pioneer 12 probe, we have visited Jupiter with remote-controlled machinery; that same probe has been sling-shot targeted to Saturn for a ringed-planet rendezvous in 1979. Now, in the most long-range project ever undertaken by NASA, the Voyager Mission is about to follow Pioneer to Jupiter and beyond.

Voyager 1 is scheduled to lift off from Cape Canaveral atop a Titan-Centaur launch vehicle on August 20, 1977. Voyager 2 will follow it a dozen days later. Their mission:

to study the gaseous planets from closer range, with more and better instrumentation, and to send more data and pictures home than from any planetary probe previously launched.

The first Voyager to arrive at Jupiter (actually this will be the second one launched—due to their different paths and speeds) is due to start sending back pictures of Jupiter when it is 80 days away from its closest approach—in December, 1978. The closest approach, from which we can expect the most spectacular photographs, is due to occur on March 5, 1979. After imaging Jupiter, the moons Amalthea, Io, Europa, Ganymede and Callisto, Voyager 2 will be hurled on its way to Saturn—just as Voyager 1 warms up to begin its 80-days-out photographing of the Jupiter system.

ETA Saturn: August 24, 1980, for Voyager 2, and June 8, 1981, for Voyager 1. At Saturn, the two probes will study the planet and its rings, the moons Titan, Tethys, Mimas, Enceladus, Dione, Rhea and Hyperion; some of the views should rival those in the breathtaking film *Silent Running*.

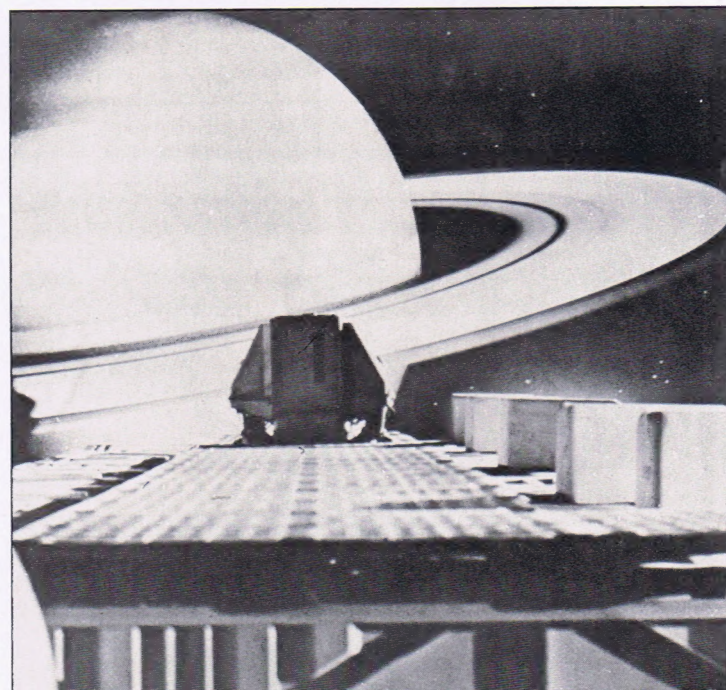
If Voyager 2 is still functioning smoothly, if there are sufficient reserves of fuel and internal power, if interplanetary conditions permit, the probe will be sent even farther into the black region of the outer planets: to Uranus and/or Neptune.

ETA Uranus: January 31, 1986.

ETA Neptune: September, 1989.

Due to the peculiar orbit, Pluto will be closer to the Sun than Neptune in 1989; so we will indeed be receiving data from the outermost point in the solar system—if all goes well. Not even Verne's fanciful story took us so far; and the world of *Star Trek* grows nearer: from Neptune, the closest star is only about 10,000 times farther from Earth.

As the *Valley Forge* in Universal's *Silent Running* approaches the rings of Saturn, one of the ship's robotic drones, Huey, performs routine maintenance. NASA's Voyager probes will be investigating the nature of the ring system, the results of which will either confirm or correct Douglas Trumbull's cinematic vision of the *Valley Forge* traversing the rings.



*(Most recent Earthbound observations have led scientists to conclude that there is a second planet with rings: Uranus, with a series of five concentric rings. The Voyager Mission will allow for close-up observation of this newly discovered phenomenon.)

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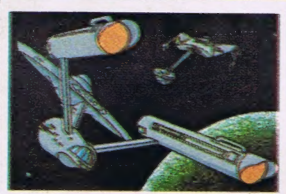
The principal crew members of the ENTERPRISE pose for a "family portrait" photographed by Mr. Spock. ST-1A

The ENTERPRISE escapes the fiery effects of exploding planet. ST-4



Spock questions Aleek-Om, an Aurelian, before the Guardian of Forever. (A very rare scene from Yesteryear) ST-5

The ENTERPRISE engages a Klingon ship in battle. ST-8



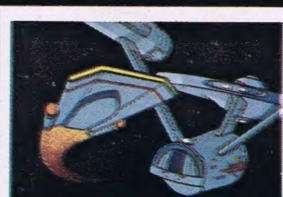
A gigantic red Sursnake is captured in nets by the Aquans. Beautiful underwater, innerspace scene. (The Ambergris Element) ST-9

Spock, as a boy, atop I'Chaya, his pet Sehlat, fighting a Vulcan mountain lion. (From Yesteryear, the most popular animated episode) ST-12



A very rare angle of the ENTERPRISE as the Aqua Shuttle blasts from its stern. ST-15

The Time Trap. Every ship is represented in this graveyard of lost ships. The ENTERPRISE is also there, struggling to get out. ST-14



The ENTERPRISE is attacked by Kukulkan's ship, which has taken on the image of a gigantic Aztec serpent. ST-20

A huge derelict spaceship, pod like, surrounds the ENTERPRISE as it drifts through a special passage. (From Beyond the Farthest Star) ST-16



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